Appendix A

Construction and Operational Health Risk Assessment

ESA

Times Mirror Square Project
Air Quality Assessment
Construction Health Risk Assessment

Off-Road Heavy-Duty Construction Equipment Emission Rates W/ MM-AQ-1

Construction Activity	Equipment Type	Schedule [a] Start Date	Schedule [a] End Date	Work Days by Activity (days)	Work Hours per Day (hours/day)	DPM Exhaust Emissions [b] (tons/year)	Emissions Rate during Work Period (grams/second)
I. Demolition	Off-Road Heavy-Duty	7/1/2018	1/31/2019	184	12	0.0220	2.51E-03
II. Site Preparation	Off-Road Heavy-Duty	2/1/2019	2/28/2019	24	12	0.00251	2.20E-03
III. Grading	Off-Road Heavy-Duty	3/1/2019	9/30/2019	183	12	0.0234	2.69E-03
IV. Foundation (North Tower)	Off-Road Heavy-Duty	10/1/2019	10/2/2019	2	12	0.00019	1.99E-03
V. Foundation (South Tower)	Off-Road Heavy-Duty	10/3/2019	10/4/2019	2	12	0.00019	1.99E-03
VI. Subterranean Parking Structure	Off-Road Heavy-Duty	10/5/2019	6/26/2020	230	12	0.0460	4.20E-03
VII. Podium Construction	Off-Road Heavy-Duty	6/27/2020	8/27/2020	53	12	0.0101	4.00E-03
VIII. Building Construction	Off-Road Heavy-Duty	8/28/2020	10/6/2022	660	12	0.1036	3.30E-03
IX. Paving	Off-Road Heavy-Duty	3/1/2022	10/6/2022	189	12	0.0109	1.21E-03
X. Architectural Coating	Off-Road Heavy-Duty	1/1/2021	10/6/2022	552	12	-	0.00E+00
XI. Renovation [c]	Off-Road Heavy-Duty	7/1/2018	8/8/2020	660	12	0.0133	4.22E-04
Maximum 12-Month Emissions (for Chronic HI analysis)							
VIII. Building Construction	*Off-Road Heavy-Duty*	*8/28/2020*	*10/6/2022*	*313*	*12*	*0.1036*	*3.30E-03*
IX. Paving	*Off-Road Heavy-Duty*	*3/1/2022*	*10/6/2022*	*189*	*12*	*0.0109*	*1.21E-03*
X. Architectural Coating	*Off-Road Heavy-Duty*	*1/1/2021*	*10/6/2022*	*313*	*12*	-	-
						Emissions Rate:	*4.03E-03*
XI. Renovation [c]	*Off-Road Heavy-Duty*	*7/1/2018*	*8/8/2020*	*313*	*12*	*0.0133*	*4.22E-04*

Notes:

a. In order to provide a conservative emissions analysis, for modeling purposes, construction emissions were modeled with a starting time period in calendar year 2018. The Project would be expected to be fully built-out with full operation of all uses by calendar year 2023. Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein.

b. California Air Resources Board, California Emissions Estimator Model (CalEEMod).

c. Renovation activity could occur at a later time. In order to provide a conservative assessment, renovation activity was modeled at the earliest possible time since emission factors are higher in earlier years compared to later years.

Source: ESA 2019

Travel On-Road Haul, Concrete, Vendor Truck Emission Rates

Construction Activity	Equipment Type	Schedule [a] Start Date	Schedule [a] End Date	Work Days per Year (days/year)	Work Hours per Day (hours/day)	Construction Activity Year	Total One-Way Truck Trips	One-Way Trip Distance per Day [b] (miles)	DPM Running Emissions Factor [c] (grams/mile)	Emissions Rate during Work Period (grams/second)
I. Demolition	T7 single construction	7/1/2018	1/31/2019	184	12	2018-2019	3,500	0.525	0.0373	8.63E-06
II. Site Preparation		2/1/2019	2/28/2019	24	12	2019	-	-	-	-
III. Grading	T7 single construction	3/1/2019	9/30/2019	183	12	2019	51,088	0.525	0.0329	1.11E-04
IV. Foundation (North Tower)	T7 single construction	10/1/2019	10/2/2019	2	12	2019	1,874	0.525	0.0329	3.74E-04
V. Foundation (South Tower)	T7 single construction	10/3/2019	10/4/2019	2	12	2019	1,564	0.525	0.0329	3.12E-04
VI. Subterranean Parking Structure	HHDT	10/5/2019	6/26/2020	230	12	2019-2020	69,460	0.525	0.0232	8.53E-05
VII. Podium Construction	HHDT	6/27/2020	8/27/2020	53	12	2020	18,921	0.525	0.0191	8.29E-05
VIII. Building Construction	HHDT	8/28/2020	10/6/2022	660	12	2020-2022	178,860	0.525	0.0191	6.29E-05
IX. Paving		3/1/2022	10/6/2022	189	12	2022	-	-	-	-
X. Architectural Coating		1/1/2021	10/6/2022	552	12	2021-2022	-	-	-	-
XI. Renovation [d]	HHDT	7/1/2018	8/8/2020	660	12	2018-2020	40,920	0.525	0.0254	1.91E-05
Maximum 12-Month Emissions (for Chronic HI analysis)										
VIII. Building Construction	*HHDT*	*8/28/2020*	*10/6/2022*	*313*	*12*	*2020-2022*	*178,860*	*0.525*	*0.0191*	*6.29E-05*
IX. Paving		*3/1/2022*	*10/6/2022*	*189*	*12*	*2022*	-	-	-	-
X. Architectural Coating		*1/1/2021*	*10/6/2022*	*313*	*12*	*2021-2022*	-	-	-	-
									Emissions Rate:	*6.29E-05*
XI. Renovation [d]	*HHDT*	*7/1/2018*	*8/8/2020*	*313*	*12*	*2018-2020*	*40,920*	*0.525*	*0.0254*	*1.91E-05*

Notes:

a. In order to provide a conservative emissions analysis, for modeling purposes, construction emissions were modeled with a starting time period in calendar year 2018. The Project would be expected to be fully built-out with full operation of all uses by calendar year 2023. Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein.

b. The portion of the on-road trip length within a 1/4 mile of the Project Site. Measured as 1/2 of the distance around the Project Site plus the average on the N Broadway, Spring Street, and Los Angeles Street route distances.

c. California Air Resources Board, EMFAC2014 on-road vehicle emissions model. Exhaust PM10 is used as a surrogate for diesel particulate matter.

d. Renovation activity could occur at a later time. In order to provide a conservative assessment, renovation activity was modeled at the earliest possible time since emission factors are higher in earlier years compared to later years.

Source: ESA 2019

Idling On-Road Haul, Concrete, Vendor Truck Emission Rates

Construction Activity	Equipment Type	Schedule [a] Start Date	Schedule [a] End Date	Work Days per Year (days/year)	Work Hours per Day (hours/day)	Construction Activity Year	Total Number of Trucks	Idling Time per Truck (minutes)	DPM Idling Emissions Factor [b] (grams/min)	Emissions Rate during Work Period (grams/second)
I. Demolition	T7 single construction	7/1/2018	1/31/2019	184	12	2018-2019	1,750	15	7.87E-05	2.60E-07
II. Site Preparation		2/1/2019	2/28/2019	24	12	2019	-	-	-	-
III. Grading	T7 single construction	3/1/2019	9/30/2019	183	12	2019	25,544	15	7.03E-05	3.41E-06
IV. Foundation (North Tower)	T7 single construction	10/1/2019	10/2/2019	2	12	2019	937	15	7.03E-05	1.14E-05
V. Foundation (South Tower)	T7 single construction	43741	10/4/2019	2	12	2019	782	15	7.03E-05	9.54E-06
VI. Subterranean Parking Structure	HHDT	43743	6/26/2020	230	12	2019-2020	34,730	15	5.43E-05	2.85E-06
VII. Podium Construction	HHDT	6/27/2020	8/27/2020	53	12	2020	9,461	15	3.48E-05	2.16E-06
VIII. Building Construction	HHDT	8/28/2020	10/6/2022	660	12	2020-2022	89,430	15	3.48E-05	1.64E-06
IX. Paving		3/1/2022	10/6/2022	189	12	2022	-	-	-	-
X. Architectural Coating		1/1/2021	10/6/2022	552	12	2021-2022	-	-	-	-
XI. Renovation [c]	HHDT	7/1/2018	8/8/2020	660	12	2018-2020	20,460	15	6.22E-05	6.70E-07
Maximum 12-Month Emissions (for Chronic HI analysis)										
VIII. Building Construction	*HHDT*	*8/28/2020*	*10/6/2022*	*313*	*12*	*2020-2022*	*89,430*	*15*	*3.48E-05*	*1.64E-06*
IX. Paving		*3/1/2022*	*10/6/2022*	*189*	*12*	*2022*	-	-	-	-
X. Architectural Coating		*1/1/2021*	*10/6/2022*	*313*	*12*	*2021-2022*	-	-	-	-
									Emissions Rate:	*1.64E-06*
XI. Renovation [c]	*HHDT*	*7/1/2018*	*8/8/2020*	*313*	*12*	*2018-2020*	*20,460*	*15*	*6.22E-05*	*6.70E-07*

Notes:

a. In order to provide a conservative emissions analysis, for modeling purposes, construction emissions were modeled with a starting time period in calendar year 2018. The Project would be expected to be fully built-out with full operation of all uses by calendar year 2023. Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein.

b. California Air Resources Board, EMFAC2014 on-road vehicle emissions model. Exhaust PM10 is used as a surrogate for diesel particulate matter.

c. Renovation activity could occur at a later time. In order to provide a conservative assessment, renovation activity was modeled at the earliest possible time since emission factors are higher in earlier years compared to later years.

Source: ESA 2019

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AERMOD Source Characteristics

Emission Source	Source Type	Number of Sources	Length of Line (m)	Source Group Unitized Emission Rate (g/s)	Release Height (m)	Length of Side X (m)	Length of Side Y (m)	Initial Lateral (m)	Initial Vertical (m)	Plume Height (m)	Plume Width (m)	Exit Temp (°F)	Inside Diameter (ft)	Exit Flow Rate (ft^3/s)
SRCGP01: Demo and New Construction														
Off-Road Construction Equipment, VOL1-20	VOLUME	20		0.0500	4.15	20	20	4.65	1.93					
SRCGP02: Renovation Activity														
Off-Road Construction Equipment, RVOL21-36	VOLUME	16		0.0625	4.15	20	20	4.65	1.93					
SRCGP03: On-Road Truck Travel														
On-Road Trucks														
SLINE1	LINE VOLUME	1	297.1	0.1165	4.15					8.3	15			
SLINE2	LINE VOLUME	1	124.1	0.0487	4.15					8.3	24			
SLINE3	LINE VOLUME	1	617.1	0.2421	4.15					8.3	24			
SLINE4	LINE VOLUME	1	628.3	0.2465	4.15					8.3	15			
SLINE5	LINE VOLUME	1	882.7	0.3463	4.15					8.3	10			
SRCGP04: On-Road Truck Idling														
On-Road Trucks, IVOL37-43	VOLUME	7		0.1429	4.15	20	20	4.65	1.93					

Notes:

Assumes construction equipment activity totalling 12 hours per weekday (Mon-Fri) and 8 hours on Saturday.

Source: ESA 2019.

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AERMOD Results

Source Group	Source Type	Unitized Max AERMOD Concentration (Annual Average) ($\mu g/m^3$)	
		Residential (South of Site) UTM: 385080.00, 3768530.00	Workplace (West of Site) UTM: 385000.00, 3768770.00
SRCGP01: Demo and New Construction	*Volume*	4.28	36.18
SRCGP02: Renovation Activity	*Volume*	7.59	11.02
SRCGP03: On-Road Truck Travel	*Line Volume*	9.35	10.15
SRCGP04: On-Road Truck Idling	*Volume*	5.83	30.17

Source: Lakes Environmental, AERMOD View 9.8.1 (Version 19191) 2019; ESA 2019.

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Maximum Individual Cancer Risk Calculations - Maximum Impacted Residential Receptor
(OEHHA 2003 Parameters)

Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)

	Construction Phase/Equipment	Emissions Group 1 (0.25 years)	2 (2 years)	3 (67.75 years)
Days	Demolition	78	106	
CONC	Off-Road Equipment	1.08E-02	1.08E-02	
	On-Road Trucks	8.07E-05	8.07E-05	
	Idling Trucks	1.52E-06	1.52E-06	
Days	Site Preparation		24	
CONC	Off-Road Equipment		9.40E-03	
	On-Road Trucks		-	
	Idling Trucks		-	
Days	Grading		183	
CONC	Off-Road Equipment		1.15E-02	
	On-Road Trucks		1.04E-03	
	Idling Trucks		1.99E-05	
Days	Foundation (North Tower)		2	
CONC	Off-Road Equipment		8.54E-03	
	On-Road Trucks		3.50E-03	
	Idling Trucks		6.66E-05	
Days	Foundation (South Tower)		2	
CONC	Off-Road Equipment		8.54E-03	
	On-Road Trucks		2.92E-03	
	Idling Trucks		5.56E-05	
Days	Subterranean Parking Structure		230	
CONC	Off-Road Equipment		1.80E-02	
	On-Road Trucks		7.97E-04	
	Idling Trucks		1.66E-05	
Days	Podium Construction		53	
CONC	Off-Road Equipment		1.71E-02	
	On-Road Trucks		7.75E-04	
	Idling Trucks		1.26E-05	
Days	Building Construction		28	632
CONC	Off-Road Equipment		1.41E-02	1.41E-02
	On-Road Trucks		5.88E-04	5.88E-04
	Idling Trucks		9.55E-06	9.55E-06
Days	Paving (Overlapping)			189
CONC	Off-Road Equipment			5.18E-03
	On-Road Trucks			-
	Idling Trucks			-
Days	Architectural Coating (Overlapping)			552
CONC	Off-Road Equipment			-
	On-Road Trucks			-
	Idling Trucks			-
Days	Renovation (Overlapping)	78	582	
CONC	Off-Road Equipment	3.20E-03	3.20E-03	
	On-Road Trucks	1.79E-04	1.79E-04	
	Idling Trucks	3.90E-06	3.90E-06	
	Work Days in Emissions Group (6 work days/week)	78	626	21,206
	Average Annual Concentration over Emissions Group	1.22E-02	1.56E-02	4.15E-04

Project Risk Calculations

	Parameter	Emissions Group 1 (0.25 years)	2 (2 years)	3 (67.75 years)	Total
DBR	Daily Breathing Rate (L/kg (body weight) per day)	302	302	302	
A	Inhalation absorption factor (default = 1).	1	1	1	
EF	Exposure Frequency (days/year)	350	350	350	
ED	Exposure Duration (years)	0.25	2	67.75	**70**
FAH	Fraction of Time at Home	1.0	1.0	1.0	
AT	Averaged Exposure Time Period (days)	25550	25550	25550	
CONC	Toxic Air Contaminant Concentration ($\mu g/m^3$)	1.22E-02	1.56E-02	4.15E-04	
DOSE	*[= CONC × DBR × A × EF × ED × FAH / AT]* (mg/kg-d)	1.26E-02	1.29E-01	1.16E-01	
CPF	Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$				
	Diesel Particulate Matter	1.1	1.1	1.1	
RISK	Cancer Risk (in one million) [= *DOSE × CPF*]	1.38E-02	1.42E-01	1.28E-01	**0.28**

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.

SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.

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Maximum Individual Cancer Risk Calculations - Maximum Impacted Workplace Receptor
(OEHHA 2003 Parameters)

Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)

	Construction Phase/Equipment	Emissions Group 1 (40 years)
Days	Demolition	184
CONC	Off-Road Equipment	9.10E-02
	On-Road Trucks	8.76E-05
	Idling Trucks	7.84E-06
Days	Site Preparation	24
CONC	Off-Road Equipment	7.95E-02
	On-Road Trucks	0.00E+00
	Idling Trucks	0.00E+00
Days	Grading	183
CONC	Off-Road Equipment	9.72E-02
	On-Road Trucks	1.13E-03
	Idling Trucks	1.03E-04
Days	Foundation (North Tower)	2
CONC	Off-Road Equipment	7.22E-02
	On-Road Trucks	3.80E-03
	Idling Trucks	3.45E-04
Days	Foundation (South Tower)	2
CONC	Off-Road Equipment	7.22E-02
	On-Road Trucks	3.17E-03
	Idling Trucks	2.88E-04
Days	Subterranean Parking Structure	230
CONC	Off-Road Equipment	1.52E-01
	On-Road Trucks	8.66E-04
	Idling Trucks	8.59E-05
Days	Podium Construction	53
CONC	Off-Road Equipment	1.45E-01
	On-Road Trucks	8.41E-04
	Idling Trucks	6.51E-05
Days	Building Construction	660
CONC	Off-Road Equipment	1.19E-01
	On-Road Trucks	6.38E-04
	Idling Trucks	4.94E-05
Days	Paving (Overlapping)	189
CONC	Off-Road Equipment	4.38E-02
	On-Road Trucks	-
	Idling Trucks	-
Days	Architectural Coating (Overlapping)	552
CONC	Off-Road Equipment	-
	On-Road Trucks	-
	Idling Trucks	-
Days	Renovation (Overlapping)	660
CONC	Off-Road Equipment	4.65E-03
	On-Road Trucks	1.94E-04
	Idling Trucks	2.02E-05
	Work Days in Emissions Group (6 work days/week)	12,520
	Average Annual Concentration over Emissions Group	1.17E-02

Project Risk Calculations

	Parameter	Emissions Group 1 (40 years)	Total
DBR	Daily Breathing Rate (L/kg (body weight) per day)	149	
A	Inhalation absorption factor (default = 1).	1	
EF	Exposure Frequency (days/year)	245	
ED	Exposure Duration (years)	40	**40**
FAH	Fraction of Time at Home	1.0	
AT	Averaged Exposure Time Period (days)	25550	
CONC	Toxic Air Contaminant Concentration ($\mu g/m^3$)	1.17E-02	
DOSE	*[= CONC × DBR × A × EF × ED × FAH / AT]* (mg/kg-d)	6.67E-01	
CPF	Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$		
	Diesel Particulate Matter	1.1	
RISK	Cancer Risk (in one million) [= *DOSE × CPF*]	7.34E-01	**0.73**

Note:

Conservatively assumes workplace receptors are exposed to Project construction diesel emissions 6 days per week instead of 5 days per week.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.

SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.

ESA, 2019

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Maximum Non-cancer Chronic Hazards / Toxicological Endpoints*

Receptor Group	Pollutant	CREL[1]	CONC [2]	WFrac	$CONC_{WF}$	HI	ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	Threshold	Over?
Project:																					
MEI - Residential	DPM	5.00E+00	2.12E-02	1.00E+00	2.12E-02	4.24E-03	-	-	-	-	-	-	-	-	-	-	-	4.24E-03	-	1.0	NO
MEI - Workplace	DPM	5.00E+00	1.51E-01	1.00E+00	1.51E-01	3.03E-02	-	-	-	-	-	-	-	-	-	-	-	3.03E-02	-	1.0	NO

Notes:

1. California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values" and "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," http://www.arb.ca.gov/toxics/healthval/healthval.htm. Tables last updated: Feburary 23, 2017.
2. Calculated as follows: (Maximum 12 Month Emission Rate × AERMOD Concentration Results) and summed for each source [off-road, on-road truck travel, on-road truck idling].

Source: ESA 2019

Where:

$CONC_{WF}$	Pollutant Concentration ($\mu g/m^3$) multiplied by the weight fraction
CREL	Chronic Reference Exposure Level
HI	Hazard Index
MEI	Maximally Exposed Individual
WFrac	Weight fraction of speciated component

* Key to Toxicological Endpoints

ALIM	Alimentary Tract	EYE	Eye	NS	Nervous System
BN	Bone	HEM	Hematologic System	REPRO	Reproductive System
CVS	Cardiovascular System	IMMUN	Immune System	RESP	Respiratory System
DEV	Developmental System	KIDN	Kidney	SK	Skin
ENDC	Endocrine System				

Haul Truck Running Emission Factors (Aggregate Model Year, Aggregate Speeds)
(for On-Road T7 single construction Trucks)

EMFAC2014 (v1.0.7) Emission Rates
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	PM10_RUNEX	PM10_IDLEX
South Coast A	2018	T7 single construction	Aggregated	Aggregated	DSL	4396.386309	401621.3552	0	0.037330204	0.113361608
South Coast A	2019	T7 single construction	Aggregated	Aggregated	DSL	4462.332416	415992.0795	0	0.032858685	0.101169812
South Coast A	2020	T7 single construction	Aggregated	Aggregated	DSL	4520.415865	430328.0015	0	0.018978917	0.013495901
South Coast A	2021	T7 single construction	Aggregated	Aggregated	DSL	4574.52748	437040.1234	0	0.01689274	0.011847817
South Coast A	2022	T7 single construction	Aggregated	Aggregated	DSL	4614.345784	443212.0116	0	0.014398408	0.010205559
South Coast A	2023	T7 single construction	Aggregated	Aggregated	DSL	4626.753607	448843.666	0	0.004553343	0.00156215
South Coast A	2024	T7 single construction	Aggregated	Aggregated	DSL	4682.575441	453935.0868	0	0.004527229	0.001509032
South Coast A	2025	T7 single construction	Aggregated	Aggregated	DSL	4705.218537	450249.238	0	0.004495066	0.001461622

Vendor Truck Running Emission Factors (Aggregate Model Year, Aggregate Speeds)
(for On-Road HHDT Trucks)

EMFAC2014 (v1.0.7) Emission Rates
Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	PM10_RUNEX	PM10_IDLEX
South Coast A	2018	HHDT	Aggregated	Aggregated	DSL	88602.97312	12283354.82	0	0.025416678	0.089581448
South Coast A	2019	HHDT	Aggregated	Aggregated	DSL	91454.70427	12784867.43	0	0.023248792	0.07816253
South Coast A	2020	HHDT	Aggregated	Aggregated	DSL	94066.79161	13265170	0	0.019106692	0.050157115
South Coast A	2021	HHDT	Aggregated	Aggregated	DSL	96532.34077	13754182.38	0	0.017119468	0.042588648
South Coast A	2022	HHDT	Aggregated	Aggregated	DSL	98579.16255	14203074.76	0	0.014761136	0.034588987
South Coast A	2023	HHDT	Aggregated	Aggregated	DSL	98621.23896	14635626.85	0	0.00598536	0.023566334
South Coast A	2024	HHDT	Aggregated	Aggregated	DSL	101363.7548	14948001.72	0	0.005977319	0.021069318
South Coast A	2025	HHDT	Aggregated	Aggregated	DSL	103677.305	15242668.08	0	0.005927949	0.018912696

Operational Health Risk Assessment Calculation Files

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On-Road Diesel-Fueled Vehicle Emission Rates

Operational Activity	Equipment Type	Days per Year (days/year)	Hours per Day (hours/day)	Emission Factor Year	Daily One-Way Vehicle Trips	One-Way Trip Distance per Day [a] (miles)	DPM Running Emissions Factor [b] (grams/mile)	Emissions Rate (grams/second)
I. Diesel-fuel motor vehicles	Motor Vehicle Fleet	365	24	2023	294	0.590	1.24E-02	2.49E-05

Notes:

a. The portion of the on-road trip length within a 1/4 mile of the Project Site. Based on a one-way travel distance towards or away from the Project Site conservatively assuming travel occurs on a north-south street (for ~500 meters) and an east-west street (for ~450 meters).

b. California Air Resources Board, EMFAC on-road vehicle emissions model.

Source: ESA 2019

Idling On-Road Diesel-Fueled Vehicle Emission Rates

Operational Activity	Equipment Type	Days per Year (days/year)	Hours per Day (hours/day)	Emission Factor Year	Daily Number of Vehicles	Idling Time per Vehicle (minutes)	DPM Idling Emissions Factor [a] (grams/min)	Emissions Rate (grams/second)
I. Diesel-fuel motor vehicles	Motor Vehicle Fleet	365	24	2023	147	15	8.28E-06	2.11E-07

Notes:

a. California Air Resources Board, EMFAC on-road vehicle emissions model.

Source: ESA 2019.

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AERMOD Source Characteristics

Emission Source	Source Type	Number of Sources	Length of Line (m)	Source Group Unitized Emission Rate (g/s)	Release Height (m)	Length of Side X (m)	Length of Side Y (m)	Initial Lateral (m)	Initial Vertical (m)	Plume Height (m)	Plume Width (m)	Exit Temp (°F)	Inside Diameter (ft)	Exit Flow Rate (ft^3/s)
Source Group 1														
Diesel-fueled motor vehicles (SLINE01)	Line-Volume	1	832.1	0.0949	4.15	n/a	n/a	n/a	n/a	8.3	24.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE02)	Line-Volume	1	893.2	0.1018	4.15	n/a	n/a	n/a	n/a	8.3	28.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE03)	Line-Volume	1	891.6	0.1016	4.15	n/a	n/a	n/a	n/a	8.3	18.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE04)	Line-Volume	1	678.1	0.0773	4.15	n/a	n/a	n/a	n/a	8.3	20.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE05)	Line-Volume	1	574.9	0.0655	4.15	n/a	n/a	n/a	n/a	8.3	26.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE06)	Line-Volume	1	990.1	0.1129	4.15	n/a	n/a	n/a	n/a	8.3	26.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE07)	Line-Volume	1	1002.2	0.1143	4.15	n/a	n/a	n/a	n/a	8.3	24.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE08)	Line-Volume	1	996.9	0.1136	4.15	n/a	n/a	n/a	n/a	8.3	24.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE09)	Line-Volume	1	988.9	0.1127	4.15	n/a	n/a	n/a	n/a	8.3	24.0	n/a	n/a	n/a
Diesel-fueled motor vehicles (SLINE10)	Line-Volume	1	923.7	0.1053	4.15	n/a	n/a	n/a	n/a	8.3	26.0	n/a	n/a	n/a
Source Group 2														
Idling diesel-fueled motor vehicles (VOL1-2)	Volume	2	n/a	0.5000	4.15	40	40	9.30	1.93	n/a	n/a	n/a	n/a	n/a

Source: ESA 2019.

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AERMOD Results

Emission Source	Source Type	Unitized Max AERMOD Concentration ($\mu g/m^3$)	
		Workplace (East of Site) UTM: 383335.00, 3767720.00	Residential (Northeast of Site) UTM: 383470.00, 3767970.00
Source Group 1		24.38	24.38
Diesel-fueled motor vehicles (SLINE01)	*Line-Volume*		
Diesel-fueled motor vehicles (SLINE02)	*Line-Volume*		
Diesel-fueled motor vehicles (SLINE03)	*Line-Volume*		
Diesel-fueled motor vehicles (SLINE04)	*Line-Volume*		
Diesel-fueled motor vehicles (SLINE05)	*Line-Volume*		
Diesel-fueled motor vehicles (SLINE06)	*Line-Volume*		
Diesel-fueled motor vehicles (SLINE07)	*Line-Volume*		
Diesel-fueled motor vehicles (SLINE08)	*Line-Volume*		
Diesel-fueled motor vehicles (SLINE09)	*Line-Volume*		
Diesel-fueled motor vehicles (SLINE10)	*Line-Volume*		
Source Group 2		153.03	17.01
Idling diesel-fueled motor vehicles (VOL1-2)	*Volume*		

Source: Lakes Environmental, AERMOD View 9.8.1 (Version 19191) 2019; ESA 2019.

Times Mirror Square Project
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Maximum Individual Cancer Risk Calculations - Sensitive Receptors (Maximum Impacted Residential Receptor)
(OEHHA 2003 Parameters)

Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)

	Operational Equipment	Emissions Group 1 (0.25 years)	Emissions Group 2 (2 years)	Emissions Group 3 (67.75 years)
Days	Diesel-fuel motor vehicles	91	730	24728.75
CONC	Off-Road Equipment	0.00E+00	0.00E+00	0.00E+00
	On-Road Diesel-Fueled Vehicles	6.07E-04	6.07E-04	6.07E-04
	Idling Diesel-Fueled Vehicles	3.59E-06	3.59E-06	3.59E-06
	Operational Days in Emissions Group (7 days/week)	91	730	24,729
	Average Annual Concentration over Emissions Group	6.11E-04	6.11E-04	6.11E-04

Cancer Risk Calculations

	Parameter	Emissions Group 1 (0.25 years)	Emissions Group 2 (2 years)	Emissions Group 3 (67.75 years)	Total 30 Year Exposure
DBR	Daily Breathing Rate (L/kg (body weight) per day)	302	302	302	
A	Inhalation absorption factor (default = 1).	1	1	1	
EF	Exposure Frequency (days/year)	350	350	350	
ED	Exposure Duration (years)	0.25	2	67.75	**70**
FAH	Fraction of Time at Home [a]	1.00	1.00	1.00	
AT	Averaged Exposure Time Period (days)	25550	25550	25550	
CONC	Toxic Air Contaminant Concentration ($\mu g/m^3$)	6.11E-04	6.11E-04	6.11E-04	
DOSE	*[= CONC × DBR × A × EF × ED × FAH / AT]* (mg/kg-d)	6.32E-04	5.06E-03	1.71E-01	
CPF	Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$				
	Diesel Particulate Matter	1.1	1.1	1.1	
RISK	Cancer Risk (in one million) [= *DOSE × CPF*]	6.95E-04	5.56E-03	1.88E-01	**0.19**

Note:

a. FAH value of 1.0 is conservatively used.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.

SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.

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Times Mirror Square Project
Air Quality Assessment
Operational Health Risk Assessment

Maximum Individual Cancer Risk Calculations - Sensitive Receptors (Maximum Impacted Residential Receptor)
COMBINED CONSTRUCTION+OPERATIONAL IMPACTS
(OEHHA 2003 Parameters)

Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)

		Emissions Group		
	Operational Equipment	**1 (0.25 years)**	**2 (2 years)**	**3 (67.75 years)**
Days	Diesel-fuel motor vehicles	91	730	24728.75
CONC	Off-Road Equipment	0.00E+00	0.00E+00	0.00E+00
	On-Road Diesel-Fueled Vehicles	6.07E-04	6.07E-04	6.07E-04
	Idling Diesel-Fueled Vehicles	3.59E-06	3.59E-06	3.59E-06
	Operational Days in Emissions Group (7 days/week)	91	730	24,729
	Average Annual Concentration over Emissions Group	6.11E-04	6.11E-04	6.11E-04

Cancer Risk Calculations

		Emissions Group			Total 30 Year
	Parameter	**1 (0.25 years)**	**2 (2 years)**	**3 (67.75 years)**	**Exposure**
DBR	Daily Breathing Rate (L/kg (body weight) per day)	302	302	302	
A	Inhalation absorption factor (default = 1).	1	1	1	
EF	Exposure Frequency (days/year)	350	350	350	
ED	Exposure Duration (years)	0.25	2	67.75	**70**
FAH	Fraction of Time at Home [a]	1.00	1.00	1.00	
AT	Averaged Exposure Time Period (days)	25550	25550	25550	
CONC	Toxic Air Contaminant Concentration ($\mu g/m^3$)	0.00E+00	0.00E+00	6.11E-04	
DOSE	*[= CONC × DBR × A × EF × ED × FAH / AT]* (mg/kg-d)	0.00E+00	0.00E+00	1.71E-01	
CPF	Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$				
	Diesel Particulate Matter	1.1	1.1	1.1	
RISK	Cancer Risk (in one million) [= *DOSE × CPF*]	0.00E+00	0.00E+00	1.88E-01	**0.19**
				Construction-period Risk	**0.28**
				Total Construction + Operational Risk	**0.47**

Note:

a. FAH value of 1.0 is conservatively used.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.

SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.

ESA, 2019

Times Mirror Square Project
Air Quality Assessment
Operational Health Risk Assessment

Maximum Individual Cancer Risk Calculations - Sensitive Receptors (Maximum Impacted Workplace)
COMBINED CONSTRUCTION+OPERATIONAL IMPACTS
(OEHHA 2003 Parameters)

Concentrations by Emissions Group (Emissions Rate × AERMOD Concentration Results)

	Operational Equipment	Emissions Group 1 (40 years)
Days	Diesel-fuel motor vehicles	14600
CONC	Off-Road Equipment	0.00E+00
	On-Road Diesel-Fueled Vehicles	6.07E-04
	Idling Diesel-Fueled Vehicles	3.23E-05
	Operational Days in Emissions Group (7 days/week)	14,600
	Average Annual Concentration over Emissions Group	6.40E-04

Cancer Risk Calculations

	Parameter	Emissions Group 1 (40 years)	Total
DBR	Daily Breathing Rate (L/kg (body weight) per day)	149	
A	Inhalation absorption factor (default = 1).	1	
EF	Exposure Frequency (days/year)	245	
ED	Exposure Duration (years)	40	**40**
FAH	Fraction of Time at Home (or Location) [a]	1.00	
AT	Averaged Exposure Time Period (days)	25550	
CONC	Toxic Air Contaminant Concentration ($\mu g/m^3$)	6.40E-04	
DOSE	*[= CONC × DBR × A × EF × ED × FAH / AT]* (mg/kg-d)	3.66E-02	
CPF	Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$		
	Diesel Particulate Matter	1.1	
RISK	Cancer Risk (in one million) [= *DOSE × CPF*]	4.02E-02	**0.04**
		Construction-period Risk	**0.73**
		Total Construction + Operational Risk	**0.77**

Note:

a. For evaluating impacts at the workplace receptor, it was conservatively assumed that workplace receptors would be exposed to the total operational emissions; therefore, this factor was increased to 1.0.

Sources:

OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, 2003.

SCAQMD, Risk Assessment Procedures for Rules 1401 and 212, Appendix L, Version 7.0, 2012.

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Times Mirror Square Project
Air Quality Assessment
Operational Health Risk Assessment

Maximum Non-cancer Chronic Hazards / Toxicological Endpoints*

Receptor Group	Pollutant	CREL[1]	CONC	WFrac	$CONC_{WF}$	HI	ALIM	BN	CVS	DEV	ENDC	EYE	HEM	IMMUN	KIDN	NS	REPRO	RESP	SK	Threshold	Over?
Project:																					
MEI - Workplace	DPM	5.00E+00	6.40E-04	1.00E+00	6.40E-04	1.28E-04	-	-	-	-	-	-	-	-	-	-	-	1.28E-04	-	1.0	NO
MEI - Residential	DPM	5.00E+00	6.11E-04	1.00E+00	6.11E-04	1.22E-04	-	-	-	-	-	-	-	-	-	-	-	1.22E-04	-	1.0	NO

Sources:

1. California Air Resources Board, "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values" and "OEHHA/ARB Approved Chronic Reference Exposure Levels and Target Organs," http://www.arb.ca.gov/toxics/healthval/healthval.htm.
   Tables last updated: September 9, 2016 and March 30, 2016. Downloaded 02/10/2017.

Where:

$CONC_{WF}$	Pollutant Concentration ($\mu g/m^3$) multiplied by the weight fraction
CREL	Chronic Reference Exposure Level
HI	Hazard Index
MEI	Maximally Exposed Individual
WFrac	Weight fraction of speciated component

* Key to Toxicological Endpoints

ALIM	Alimentary Tract	EYE	Eye	NS	Nervous System
BN	Bone	HEM	Hematologic System	REPRO	Reproductive System
CVS	Cardiovascular System	IMMUN	Immune System	RESP	Respiratory System
DEV	Developmental System	KIDN	Kidney	SK	Skin
ENDC	Endocrine System				

EMFAC2014 (v1.0.7) Emission Rates
Region Type: Air Basin
Region: South Coast
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

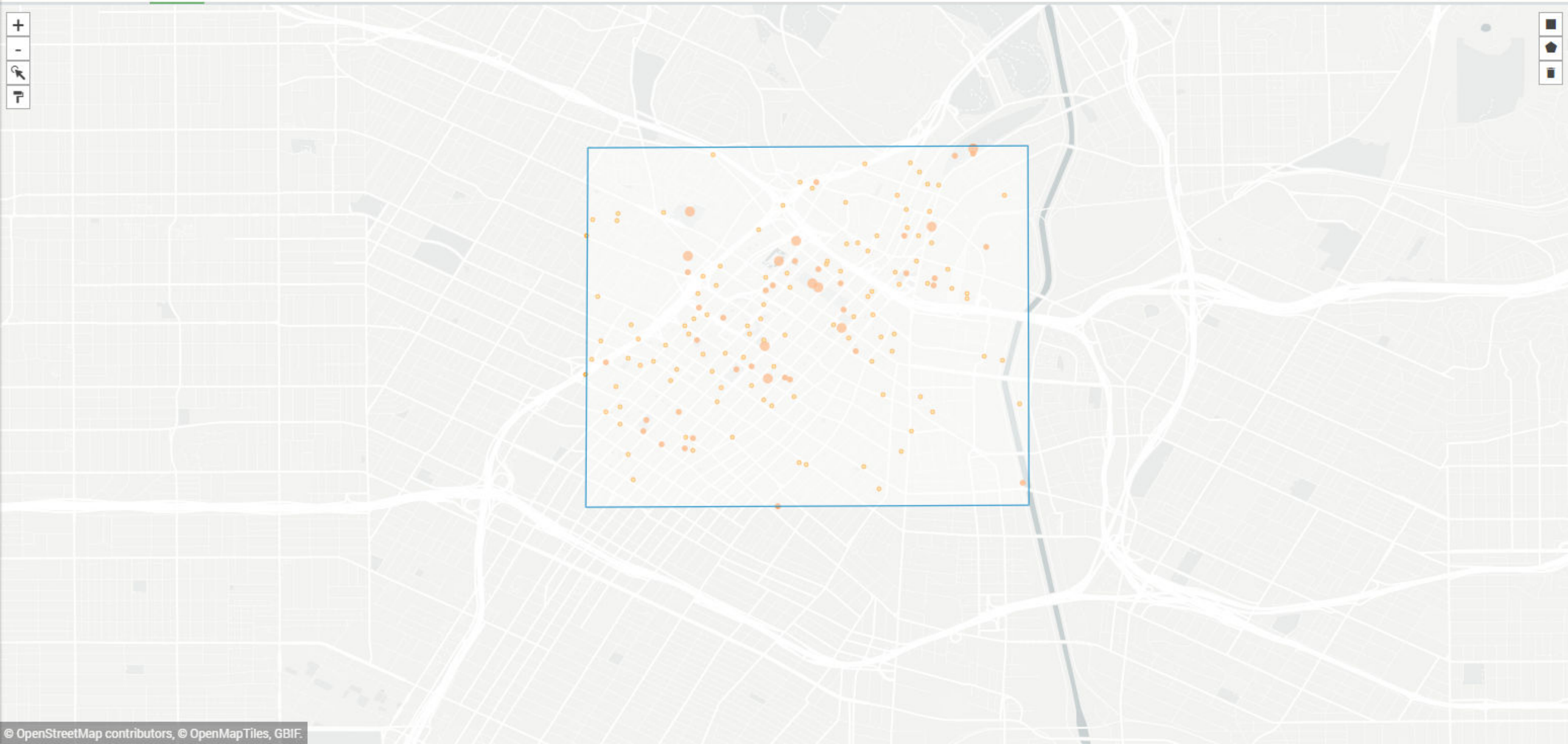
				Weighted Average Emission Factor	
Vehicle Type (diesel only)	PM10 RunEx	PM10 IdleEx	Population	PM10 RunEx	PM10 IdleEx
All Other Buses	3.16E-03	1.32E-04	4.51E+03	2.88E-05	1.21E-06
LDA	1.04E-02	0.00E+00	6.82E+04	1.43E-03	0.00E+00
LDT1	9.73E-02	0.00E+00	5.67E+02	1.12E-04	0.00E+00
LDT2	5.16E-03	0.00E+00	4.46E+03	4.65E-05	0.00E+00
LHD1	1.70E-02	2.45E-02	9.61E+04	3.30E-03	4.76E-03
LHD2	1.29E-02	2.42E-02	4.21E+04	1.10E-03	2.06E-03
MDV	5.47E-03	0.00E+00	2.78E+04	3.08E-04	0.00E+00
MH	9.78E-02	0.00E+00	9.35E+03	1.85E-03	0.00E+00
Motor Coach	5.03E-03	2.53E-03	1.10E+03	1.12E-05	5.61E-06
PTO	5.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SBUS	3.13E-02	3.65E-02	5.20E+03	3.29E-04	3.83E-04
T6 Ag	3.62E-03	1.32E-04	2.62E+02	1.92E-06	7.01E-08
T6 CAIRP heavy	2.79E-03	1.32E-04	2.25E+02	1.27E-06	6.03E-08
T6 CAIRP small	2.48E-03	1.32E-04	5.67E+02	2.85E-06	1.52E-07
T6 instate construction heavy	3.31E-03	1.78E-04	2.99E+03	2.00E-05	1.07E-06
T6 instate construction small	2.83E-03	1.76E-04	1.03E+04	5.91E-05	3.68E-06
T6 instate heavy	3.17E-03	1.32E-04	3.83E+04	2.46E-04	1.03E-05
T6 instate small	2.73E-03	1.32E-04	8.07E+04	4.45E-04	2.16E-05
T6 OOS heavy	2.81E-03	1.32E-04	1.31E+02	7.44E-07	3.51E-08
T6 OOS small	2.48E-03	1.32E-04	3.25E+02	1.63E-06	8.71E-08
T6 Public	1.72E-02	9.74E-03	5.77E+03	2.01E-04	1.14E-04
T6 utility	1.95E-03	1.32E-04	1.49E+03	5.86E-06	3.98E-07
T7 Ag	6.07E-03	1.19E-03	1.92E+02	2.36E-06	4.62E-07
T7 CAIRP	6.05E-03	6.60E-03	7.98E+03	9.77E-05	1.06E-04
T7 CAIRP construction	5.88E-03	7.64E-03	6.66E+02	7.92E-06	1.03E-05
T7 NNOOS	4.63E-03	8.19E-03	8.79E+03	8.24E-05	1.46E-04
T7 NOOS	6.07E-03	8.19E-03	3.20E+03	3.93E-05	5.30E-05
T7 POLA	6.39E-03	2.07E-03	1.53E+04	1.98E-04	6.40E-05
T7 Public	4.15E-02	1.67E-01	7.38E+03	6.19E-04	2.50E-03
T7 Single	3.97E-03	1.19E-03	1.12E+04	9.01E-05	2.69E-05
T7 single construction	4.58E-03	1.56E-03	4.30E+03	3.98E-05	1.36E-05
T7 SWCV	7.75E-03	1.10E-01	7.12E+03	1.12E-04	1.58E-03
T7 tractor	6.00E-03	1.19E-03	1.93E+04	2.35E-04	4.65E-05
T7 tractor construction	6.44E-03	1.41E-03	3.46E+03	4.51E-05	9.91E-06
T7 utility	2.96E-03	1.80E-03	6.31E+02	3.78E-06	2.30E-06
UBUS	1.59E-01	0.00E+00	4.12E+03	1.33E-03	0.00E+00
Vehicle Fleet			**4.94E+05**	**1.24E-02**	**1.19E-02**
				grams/vehicle/mile	**grams/vehicle/day**

Appendix B
eBird Database Results

ESA

SEARCH OCCURRENCES | 4,826 WITH COORDINATES

TABLE GALLERY MAP TAXONOMY METRICS DOWNLOAD



Occurences within 1-mile	Occurrence #	Scientific Name	Common name
	464	Columba livia	Rock Pigeon
	326	Passer domesticus	House sparrow
	261	Brotogeris chiriri	yellow-chevroned parakeet
	242	Haemorhous mexicanus	house finch
	215	Corvus brachyrhynchos	American crow
	214	Corvus corax	common raven
	210	Sturnus vulgaris	European starling
	201	Mimus polyglottos	Northern mockingbird
	192	Aeronautes saxatalis	white-throated swift
	184	Setophaga coronata	yellow-rumped warbler
	162	Zenaida macroura	mourning dove
	148	Buteo jamaicensis	red-tailed hawk
	140	Chaetura vauxi	Vaux's swift
	136	Larus occidentalis	western gull
	121	Calypte anna	Anna's hummingbird
	111	Selasphorus sasin	Allen's humminbird
	105	Sayornis nigricans	black phoebe
	90	Melozone crissalis	California towhee
	90	Psaltriparus minimus	bushtit
	69	Falco peregrinus	Peregrine Falcon
	68	Aphelocoma californica	California scrub-jay
	67	Patagioenas fasciata	band-tailed pigeon
	56	Spinus psaltria	lesser goldfinch
	51	Zonotrichia leucophrys	white-crowned sparrow
	47	Leiothlypis celata	orange-crowned warbler
	47	Accipiter cooperii	Cooper's hawk
	39	Larus californicus	California gull
	34	Tyrannus vociferans	Cassin's kingbird
	33	Bombycilla cedrorum	cedar waxwing
	30	Regulus calendula	ruby-crowned kinglet
	28	Icterus cucullatus	hooded oriole
	28	Falco sparverius	American kestrel
	22	Anas platyrhynchos	mallard
	18	Setophaga townsendi	Townsend's warbler
	17	Euphagus cyanocephalus	Brewer's blackbird
	16	Polioptila caerulea	blue-gray gnatcatcher
	14	Cathartes aura	turkey vulture
	13	Petrochelidon pyrrhonota	Cliff swallow
	13	Catharus guttatus	hermit thrush
	13	Phalacrocorax auritus	double-crested cormorant
	12	Troglodytes aedon	house wren
	11	Passerculus sandwichensis	Savannah sparrow
	11	Sayornis saya	Say's phoebe
	11	Buteo lineatus	red-shouldered hawk
	11	Piranga ludoviciana	western tanager
	11	Protonotaria citrea	Prothonotary warbler
	11	Cardellina pusilla	Wilson's warbler
	11	Setophaga nigrescens	Black-throated gray warbler
	11	Quiscalus mexicanus	Great-tailed grackle
	11	Turdus migratorius	American robin
	11	Stelgiodopteryx serripennis	Northern rough-winged swallow
	10	Streptopelia chinensis	Spotted dove
	10	Hirundo rustica	barn swallow
	9	Melospiza lincolnii	Lincoln's Sparrow
	9	Myiarchus cinerascens	Ash-throated flycatcher

9	Chaetura pelagica	Chimney Swift
9	Streptopelia decaocto	Eurasian collared dove
8	Melospiza melodia	Song sparrow
8	Geothlypis trichas	Common yellowthroat
8	Sturnella neglecta	Western meadowlark
8	Setophaga ruticilla	American Redstart
8	Spinus tristis	American goldfinch
7	Passerella iliaca	Fox Sparrow
7	Icterus bullockii	Bullock's Oriole
7	Branta canadensis	Canada goose
7	Setophaga petechia	Yellow warbler
7	Pipilo maculatus	Spotted towhee
7	Colaptes auratus	Northern Flicker
7	Sialia mexicana	Western Bluebird
7	Ardea herodias	Great Blue Heron
7	Lonchura punctulata	Scaly-breasted munia
6	Junco hyemalis	Dark-eyed Junco
6	Setophaga palmarum	Palm Warbler
5	Charadrius vociferus	Killdeer
5	Larus delawarensis	Ring-billed gull
5	Himantopus mexicanus	Black-necked stilt
5	Larus argentatus	Herring gull
5	Baeolophus inornatus	Oak Titmouse
5	Phainopepla nitens	Phainopepla
5	Tyto alba	Barn Owl
5	Psittacara mitratus	Mitred parakeet
5	Dryobates nuttallii	Nuttall's woodpecker
5	Ardea alba	Great Egret
4	Fulica americana	American coot
4	Anthus rubescens	American Pipit
4	Egretta thula	Snowy Egret
4	Molothrus ater	Brown-headed cowbird
4	Accipiter striatus	Sharp-shinned hawk
4	Amazona viridigenalis	Red-crowned Amazon
4	Lanius ludovicianus	Loggerhead Shrike
3	Pandion haliaetus	Osprey
3	Nycticorax nycticorax	Black-crowned Night-heron
3	Poecile gambeli	Mountain Chickadee
3	Pheucticus melanocephalus	Black-headed grosbek
3	Archilochus alexandri	Black-chinned hummingbird
3	Leiothlypis ruficapilla	Nashville Warbler
3	Psittacara erythrogenys	red-masked parakeet
3	Vireo huttoni	Hutton's vireo
3	Melanerpes formicivorus	Acorn woodpecker
3	Euplectes franciscanus	Northern Red Bishop
2	Anas americana	American wigeon
2	Tyrannus verticalis	Western Kingbird
2	Calypte costae	Costa's hummingbird
2	Selasphorus rufus	Rufous hummingbird
2	Dendrocopos pubescens	Downy woodpecker
2	Larus glaucescens	Glaucous-winged gull
2	Calidris mauri	Western sandpiper
2	Catoptrophorus semipalmatus	Willet
2	Pycnonotus jocosus	Red-whiskered Bulbul
2	Vireo gilvus	Warbling Vireo
2	Aimophila ruficeps	Rufous-crowned Sparrow

2	Thryomanes bewickii	Bewick's Wren
2	Oxyura jamaicensis	Ruddy Duck
2	Bucephala albeola	Bufflehead
2	Sterna forsteri	Forster's tern
2	Contopus sordidulus	Western wood pewee
2	Passerina amoena	Lazuli bunting
2	Toxostoma redivivum	California thrasher
2	Geothlypis tolmiei	MacGillivray's warbler
2	Setophaga occidentalis	Hermit Warbler
2	Setophaga magnolia	Magnolia Warbler
2	Agelaius phoeniceus	Red-winged blackbird
2	Empidonax difficilis	Pacific-slope flycatcher
2	Athene cunicularia	Burrowing Owl
2	Tachycineta thalassina	Violet-green Swallow
1	Megaceryle alcyon	Belted kingfisher
1	Cypseloides niger	Black Swift
1	Picoides villosus	Hairy Woodpecker
1	Amazona finschi	Lilac-crowned parrot
1	Charadrius semipalmatus	Semipalmated plover
1	Elanus leucurus	White-tailed Kite
1	Hydroprogne caspia	Caspian tern
1	Limnodromus scolopaceus	Long-billed Dowitcher
1	Limosa fedoa	Marbled Godwit
1	Tringa melanoleuca	Greater Yellowlegs
1	Calidris minutilla	Least sandpiper
1	Calidris alpina	Dunlin
1	Numenius americanus	Long-billed Curlew
1	Gallinago delicata	Wilson's Snipe
1	Aechmophorus clarkii	Clark's grebe
1	Podiceps nigricollis	Eared Grebe
1	Podilymbus podiceps	Pied-billed Grebe
1	Cyanocitta stelleri	Steller's Jay
1	Empidonax oberholseri	Dusky Flycatcher
1	Tachycineta bicolor	Tree Swallow
1	Cardinalis cardinalis	Northern Cardinal
1	Catharus ustulatus	Swainson's Thrush
1	Spizella pallida	Clay-colored Sparrow
1	Spizella passerina	Chipping Sparrow
1	Chamaea fasciata	Wrentit
1	Anas cyanoptera	Cinnamon teal
1	Chen caerulescens	Snow Goose
1	Mergus serrator	Red-breated Merganser
1	Lophodytes cucullatus	Hooded Merganser
1	Callipepla californica	California Quail
1	Pelecanus erythrorhynchos	American White Pelican
1	Contopus cooperi	Olive-sided Flycatcher
1	Passerina caerulea	Blue Grosbeak
1	Zonotrichia atricapilla	Golden-crowned Sparrow
1	Spinus pinus	Pine Siskin
1	Spinus lawrencei	Lawrence's Goldfinch
1	Bubo virginianus	Great Horned Owl
1	Thectocercus acuticaudatus	Blue-crowned Parakeet
1	Plegadis chihi	White-faced Ibis
1	Falco columbarius	Merlin

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Appendix C
Transportation Memorandum

ESA

FEHR PEERS

MEMORANDUM

Date: January 10, 2020

To: Kimberly Comacho, ESA

From: Tom Gaul, Fehr & Peers

Subject: ***Responses to Comments from Smith Engineering & Management on the Final Environmental Impact Report for the Times Mirror Square Project***

Ref: LA17-2909

This memorandum provides responses to the comments submitted by Daniel T. Smith of Smith Engineering & Management dated October 11, 2019, attached to the letter from Richard Toshiyuki Drury of Lozeau Drury dated October 16, 2019, commenting on the Final Environmental Impact Report for the Times Mirror Square Project.

Comment Smith-1

At your request, I have reviewed the Draft Environmental Impact Report (hereinafter the "DEIR") for the Times Mirror Square Project (the "Project") in the City of Los Angeles (the "City"). My review is specific to the Traffic and Circulation sections of that document and related appendices.

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 50 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and performed adequacy reviews of numerous transportation and circulation sections of environmental impact reports prepared under the California Environmental Quality Act (CEQA) including residential and mixed use complexes. My professional resume is attached. Findings of my review are summarized below.

Overview

The DEIR discloses that the Project would have significant traffic impact in the Existing + Project condition at the intersection of Broadway with W. 2nd and in the Future (2023 + Project condition at six intersections:

1. S. Figueroa Street & W. 2nd Street (PM peak hour)
5. Hill Street & W. 1st Street (AM peak hour)
10. Broadway & W. 1st Street (both peak hours)
11. S. Broadway & W 2nd Street (both peak hours)
12. S. Broadway & W. 3rd Street (AM peak hour)
17. S. Spring Street & W. 2nd Street (AM peak hour).

It is critical that the severity of impact at these locations be accurately disclosed since the DEIR finds that physical improvements at these locations are infeasible. As a consequence, in order to approve this Project,

findings of overriding considerations will have to be made. To make such findings, public policy-makers and the public must have confidence that the severity of impacts that are overridden are accurately disclosed.

Response to Comment Smith-1

These are introductory remarks introducing the remainder of the letter. See the Responses to Comments Smith-2 through Smith-12 below for responses to the specific comments in the letter.

Comment Smith-2

There are reasons why the true severity of the Project's impacts have not been disclosed. One of these is that with the significant impacts at the intersections disclosed as noted above, it is highly likely that there would be queuing impacts at those locations. Yet the DEIR fails to consider queues at those locations. It only analyzes queues at the Project driveways.

Response to Comment Smith-2

The transportation impact analysis provided in Section IV.P, *Transportation and Traffic*, of the Draft EIR and Appendix L-1 of the Draft EIR was conducted in accordance with the methodology and criteria specified in the Los Angeles Department of Transportation's (LADOT's) *Transportation Impact Study Guidelines* in force at the time of the analysis. This methodology and criteria do not require any queuing analysis. The Draft EIR's traffic analysis was confirmed and accepted by LADOT in their traffic study assessment letter dated May 21, 2018, and included in Appendix L to the DEIR. The City of Los Angeles, as lead agency, has the discretion to determine the appropriate methodology and significance thresholds for assessing traffic impacts, The City has never established any methodology or impact criteria based on queuing. Rather, the City established and historically utilized the Critical Movement Analysis (CMA) methodology, which assesses traffic impacts based on changes in volume to capacity ratios and levels of service (LOS). The Project traffic analysis appropriately used this established methodology. Moreover, LOS is related to queuing, in that there are greater levels of queueing at worse levels of service As acknowledged by the commenter in Comment Smith-1, the Draft EIR did find that the Project would have significant impacts at six intersections. This finding was based on LADOT's impact criteria for level of service. Level of service is a measure of the operating condition of an intersection and inherently reflects queuing in that there are greater levels of queuing at worse levels of service.

Comment Smith-3

Another reason is because the DEIR analysis distained to consider the traffic consequences of the Downtown Streetcar operation. This streetcar would operate in street-running configuration southbound on Broadway and northbound on Hill Street in the Project vicinity. Seven of the DEIR's study intersections and four of the intersections disclosed to be significantly impacted by the subject Project would be on the streetcar route. The operations and/or lane reservations for the streetcar would inevitably have deleterious effects on traffic that could only intensify the severity of the Projects traffic impacts that have been disclosed. Also, the traffic impacts of the Project could have deleterious effect on streetcar operations.

Response to Comment Smith-3

As discussed on page II-15 of the DEIR, the Downtown Streetcar is not currently funded. Metro's Measure M funding plan does not allocated funds to the Downtown Streetcar project until fiscal year 2053, much

later than the Project's buildout year of 2023. As such, consideration of the Downtown Streetcar as a related project in the DEIR would be speculative. Also see the Response to Comment Smith-8.

Comment Smith-4

Another reason is the trip generation analysis applies an obsolete basic trip generation data resource and applies trip generation adjustment factors in ways that are inconsistent with the timing of certain transit improvements and the characteristics of the setting of the Project. As a consequence, the Project's contribution of net new trips is understated.

Response to Comment Smith-4

See the Responses to Comments Smith-9 and Smith-10.

Comment Smith-5

Yet another reason is that the traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.

Response to Comment Smith-5

The commenter agrees that this percentage is likely true of the person-trips generated by the Project. Since most of these trips could be made by walking, bicycling or transit, assigning these trips as vehicle trips is in fact a conservative assumption.

Comment Smith-6

Finally, the analysis fails to consider the impacts of increasing reliance on Transportation Network Companies (TNCs or ridesharing).

Response to Comment Smith-6

See the Response to Comment Smith-12.

Comment Smith-7

Failure to Consider Queuing

As noted above, the DEIR discloses that the Project would have significant traffic impacts at 6 intersections in the 2023 project completion scenario. At 4 of these locations the impacts involve operations in the Level-of-Service (LOS) E or F. Locations experiencing LOS E or F operations are highly likely to have queuing problems which further degrade conditions. Yet the DEIR performed no queue analysis at these obvious locations.

Response to Comment Smith-7

See Response to Comment Smith-2.

Comment Smith-8

Failure to Consider the Effects of the Downtown Streetcar

As noted above, the City has approved plans for a downtown streetcar operation that would run by the Project site southbound on Broadway and close to the Project site on Hill Street. It would run through 4 of the intersections where the DEIR discloses the Project would have significant traffic impacts. The DEIR dismisses consideration of the streetcar project in the traffic analysis of the subject Project, Citing the fact that as of August 3, 2018 the Streetcar Project was not fully funded.[1] However, the Notice of Preparation ("NOP") on the subject Project was not issued until June 30, 2017. By that date the LA Bureau of Engineering published a CEQA FEIR on the Streetcar on October 24, 2016 and it was certified by the City Council on November 29, 2016. The LA City Council also approved the streetcar route on November 29, 2016. Hence, the streetcar project was reasonably foreseeable at the time of the NOP for the Times-Mirror EIR and its design was defined at a level of detail sufficient for traffic impact analysis.

Disregarding the streetcar based on funding status is inconsistent with the City's treatment of other developments contained in the list of Related Projects LADOT provides as input to the cumulative analysis. There is no evidence of consideration whether a project is fully funded to be entered onto the related projects list. The only criterion seems to be that a project has formally filed for planning, zoning and environmental approvals.

Response to Comment Smith-8

As noted in the Response to Comment 4 and in the comment itself, the Downtown Streetcar is not currently funded. Metro's Measure M funding plan does not allocated funds to the Downtown Streetcar project until fiscal year 2053, much later than the Project's buildout year of 2023. As such, consideration of the Downtown Streetcar as a related project in the DEIR would be speculative. This is consistent with the City's standard approach and applicable case law, under which transportation improvement projects without funding are not considered as related projects. The City has no reason to believe that development projects that have filed for approvals are not funded.

Comment Smith-9

Obsolete Trip Generation Data Resource, Adjustments Inconsistent With Timing of Transit Improvements and Adjustments Inconsistent With the Nature of Project Components

The DEIR's transportation impact analysis relies on basic trip generation rates from the Institute of Transportation Engineers publication, Trip Generation, 9th Edition, released in 2012. The subsequent 10th Edition was released in late 2017. A significant improvement of the 10th Edition over the 9th Edition is a focus on data for high rise residential and mixed use developments in dense urban settings. Even though the 10th Edition was released a few months later than the date of the NOP, the EIR traffic impact analysis, which was not completed until early May, 2018,[2] could easily have relied on the superior edition of the data source.

Because of the limitations of early editions of Trip Generation, which focused on sites involving single land use types which were most easily countable in suburban settings where transit and pedestrian activity tended to be minimal as opposed to dense urban, well-transit-served, highly pedestrianized areas with mixed use developments, and also did not distinguish between new trips generated by the project as differentiated from trips attracted from existing traffic (passers-by), adjustment factors were developed to

take account of these considerations. However, in the subject DEIR some adjustments seem to have been misapplied.

Response to Comment Smith-9

The ITE 9th Edition trip generation manual was the most up-to-date source available at the time the transportation impact analysis was conducted for the Project. The data from this source was the basis for the trip generation estimates approved by LADOT in the traffic study MOU for the Project, which was signed in March 2017 prior to release of the ITE 10th Edition manual.

The ITE 10th Edition trip generation manual provides more current trip generation rates for Center City Core areas that were not available in the ITE 9th Edition manual and are lower than trip generation rates for more suburban locations. If the analysis were to be updated to utilize the more recently available data from the ITE 10th Edition trip general manual, the estimated trip generation for the Project would be lower than that estimated in the DEIR. Therefore, the transportation impact analysis presented in the DEIR is conservative.

Comment Smith-10

In specific, the DEIR analysis takes a 25 percent peak hour transit credit on the trips of the Project's non-residential components based on the assumed 2023 completion of the of the 2nd St./Broadway Regional Connector Station immediately adjacent to the Project site (same completion year as the Project). This is fine for the 2023 analysis. However, for the Existing + Project analysis those Project components should only get the 15 percent transit credit the analysis assumes for the existing uses of the site since that adjacent station did not exist in 2017.

Also, the analysis assumes a 40 percent attracted passer-by discount on trips to/from the supermarket component of the Project. However, this is a passer-by attraction rate generally only achieved in supermarkets located along suburban arterials in centers with copious surface parking. This is not even close to realistic when people are already encased in their vehicles on urban streets in a dense urban downtown trying to get somewhere else and where they would have to enter and exit a multi-level parking garage or hunt for scarce street parking.

Reasonable changes to both of these adjustment factors could significantly alter the severity of the impacts disclosed and might result in impacts at other locations. In particular, at intersection 7, Hill Street with W. 3rd, which is on the cusp of the Project causing sufficient volume/capacity (V/C) change[3] to be found to be significantly impactful (and is also on the route of the downtown streetcar) appropriate changes to these adjustment factors would certainly result in findings of significant impact.

Response to Comment Smith-10

The transit credit taken in the transportation impact analysis is consistent with guidance in the LADOT *Transportation Impact Study Guidelines* in force at the time of the analysis. The LADOT guidance provides for a 25% credit for projects adjacent to a rail transit station. The 2nd Street/Broadway Regional Connector Station is currently under construction and will be open prior to the Project completion in 2023. Therefore, it is appropriate to consider this as an adjusted baseline condition in both the existing plus project and future Project impact analyses. Furthermore, the existing plus project scenario is a hypothetical scenario as the Project will not be operational until 2023/2024. As it was included for comparison purposes, the same trip generation assumptions were made as for the future scenario.

Regarding the 40 percent discount applied to the supermarket, traditional pass-by trips are vehicle trips attracted from an adjacent suburban arterial. In the case of a supermarket located in a dense urban center, however, many patrons will likely walk from nearby locations and the pass-by discount was used as a surrogate for these trips. It is unlikely that a supermarket in this location would attract vehicle trips at the level that a supermarket in a suburban setting would attract; however, the available trip generation rates (in both the ITE 9th and ITE 10th Editions) are for supermarkets in suburban locations. Therefore, the 40 percent discount is appropriate. LADOT reviewed and approved the trip generation estimates and trip reduction credits in the traffic study MOU for the Project.

Comment Smith-11

The Project Trip Distribution Understates Traffic at Critical Locations

The DEIR traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. It is understood that the City of Los Angeles Travel Demand Model, the reported basis for the 35 percent local trips assumption, is a person- trip mode. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.

Response to Comment Smith-11

See the Response to Comment Smith-5.

Comment Smith-12

Lack of Consideration of Transportation Network Companies (Ridesharing) Effects on Tripmaking and Mode Choice

The rise of Transportation Network Companies (ridesharing operations like Uber and Lyft) has dramatically changed the way people travel in urban areas in recent years. Recent studies have found that TNCs have cut into transit, walk and bike shares of trip-making and caused induced trips (trips that would not otherwise be made) and, due to the recirculation to access new rides and careless loading and unloading, caused an approximate doubling in congestion and vehicle miles traveled (VMT) over that which would be ordinarily be accounted for by land use development in dense urban areas.[4] The DEIR has made no effort to estimate traffic due to TNC use due to the Project. This is a critical flaw.

Response to Comment Smith-12

To date, research data into mode shares for transportation network company (TNC) use is limited and LADOT has not established a methodology for considering their use. Anecdotal evidence suggests that TNCs are used more for occasional discretionary trips (such as to restaurants) rather than for daily trips (such as most trips generated by residential or office uses) due to their higher cost. While the proposed Project does contain supermarket and restaurant uses, the majority of the Project is residential and office.

Comment Smith-13

Conclusion

This concludes my comments on the Times-Mirror Project DEIR transportation element. Given the foregoing, I conclude that the DEIR transportation analysis must be revised and recirculated in draft status.

Response to Comment Smith-13

This comment is a conclusion to the commenter's letter. Responses to these comments are provided in Responses to Comments Smith 2-2 through Smith-12.

As stated in the memorandum from LADOT to the Department of City Planning dated May 21, 2018, reproduced in Appendix L-2 to the Draft EIR approving the transportation impact analysis for the Project, "The results of the transportation impact analysis, which adequately accounted for the other known development projects in evaluating potential cumulative impacts, adequately evaluated the project's traffic impacts on the surrounding community …"

Appendix D

Memorandum on Feasibility of Trucks

ESA

Attention: Ben Spector
Development Manager
ONNI GROUP
315 West 9th Street, Suite 801
Los Angele, CA 90015

Re: Times Mirror Square Project

Dear Ben

As you know, we are one of Southern California's leading ready-mix concrete suppliers. You are considering hiring us for the concrete pours for the Times Mirror Square Project in Downtown Los Angeles. You have asked us whether it would be feasible to implement a mitigation measure requiring the concrete truck operators to use only zero-emission (ZE) and/or near-zero emission (NZE) concrete trucks to reduce such impacts.

We will need to use multiple concrete suppliers during the two continuous concrete pouring foundation phases to provide the requisite amount of trucks. We currently anticipate using Associated RMC and A&A Ready Mix. However, it is not possible to commit to these companies so far in advance of the job.

Regardless, neither of these suppliers that we would use have fleets that include any ZE or NZE concrete trucks. Therefore, neither we nor our sub-subcontractors can commit to using ZE or NZE concrete trucks for the project's concrete pouring phases.

Based on our extensive experience with building highrise projects in and around Los Angeles, we conclude that the above measure would not be feasible. Please note, however, that given the one year delay in the commencement of project construction, we can now commit to using only concrete trucks that are compliant with the California Air Resources Board's 2010 engine emissions standards.

Very truly yours,
Brandon M. Mosavian
Sales Representative, Associated RMC

Responses to Lozeau Drury LLP Letter

Richard Toshiyuki Drury
Lozeau Drury LLP
1939 Harrison Street, Ste. 150
Oakland, CA 94612
Dated October 16, 2019

Comment No. 2-1

Dear Mr. Lamborn, Mr. Bertoni, and Ms. Wolcott:

This letter is submitted on behalf of Supporters Alliance For Environmental Responsibility ("SAFER"), a California nonprofit public benefit corporation, regarding the Draft Environmental Impact Report ("DEIR") and Final Environmental Impact Report ("FEIR") prepared for Times Mirror Square, Project No. ENV-2016-4676-EIR (SCH No. 2017061083) (the "Project"). After reviewing the DEIR and FEIR (collectively, "EIR"), we conclude that the EIR fails as an informational document and fails to impose all feasible mitigation measures to reduce the Project's impacts. SAFER requests that the Hearing Officer and Advisory Agency refrain from recommending certification of the EIR at this time and instead request the City of Los Angeles ("City") to address these shortcomings in a revised draft environmental impact report ("RDEIR") and recirculate the RDEIR prior to considering approvals for the Project.

Response to Comment No. 2-1

This comment is an introduction to SAFER, represented by Lozeau Drury LLP, and the remainder of the appeal letter. This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted. Further responses are provided below.

Comment No. 2-2

I. PROJECT DESCRIPTION

The Project proposes to rehabilitate the Times, Plant, and Mirror Buildings and build a mixed-use development on 3.6 acres of land bounded by W. 1st Street, S. Spring Street, W. 2nd Street, and S. Broadway Street in the Central City Plan Area of the City of Los Angeles. The Project would demolish the existing Executive Building at the corner of W. 1st Street and S. Broadway and parking garage at the corner of W. 2nd Street and S. Broadway to allow for the development of the Project's mixed-use component. The Project will contain up to 1,127 residential units, and approximately 34,572 square feet of commercial space among the 37-story "North Tower" and 53-story "South Tower" constructed above a five-story parking podium. The space below the podium would contain an additional nine levels of subterranean parking. In total, the Project proposes up to 1,511,908 square feet of floor area.

Response to Comment No. 2-2

This comment contains a summary of the Project as described in Chapter II, *Project Description*, of the Draft EIR. This comment does not concern any environmental issue or information addressed or contained in the EIR. Therefore, no further response is warranted. However, this comment is noted, and will be presented to the decision makers for their review and consideration.

Comment No. 2-3

II. LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") (except in certain limited circumstances). *See, e.g.*, Pub. Res. Code § 21100. The EIR is the very heart of CEQA. *Dunn- Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal. App. 4th 98, 109.

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 Cal. Code Regs. ("CEQA Guidelines") § 15002(a)(1). "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564. The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs*. (2001) 91 Cal. App. 4th 1344, 1354 ("Berkeley Jets"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures. CEQA Guidelines § 15002(a)(2) and (3); see also, *Berkeley Jets*, 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines §15002(a)(2). If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." Pub. Res. Code § 21081; CEQA Guidelines § 15092(b)(2)(A) & (B). The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 732 (Cal. App. 5th Dist. 1990).

The EIR is the very heart of CEQA "and the integrity of the process is dependent on the adequacy of the EIR." *Berkeley Jets*, 91 Cal. App. 4th 1109, 1355. CEQA requires that a lead agency analyze all potentially significant environmental impacts of its proposed actions in an EIR. Pub. Res. Code § 21100(b)(1); Guidelines § 15126(a); *Berkeley Jets*, 91 Cal.App.4th 1344, 1354. The EIR must not only identify the impacts, but must also provide "information about how adverse the impacts will be." *Santiago County Water Dist. v. County of Orange* (1981) 118 Cal.App.3d 818, 831. The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau*, 221 Cal.App.3d 692, 732. "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Communities for a Better Env't*, 103 Cal.App.4th 98, 109.

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added), quoting, *Laurel Heights Improvement Assn. v. Regents of University of California*, 47 Cal. 3d 376, 391 409, fn. 12 (1988). A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process." *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946. As discussed below, and in the attached expert comment letters of expert Dr. Smallwood, expert consulting firm SWAPE, and Mr. Smith, the EIR for this Project fails to adequately analyze and mitigate the Project's impacts.

The lead agency must evaluate comments on the draft EIR and prepare written responses in the final EIR ("FEIR"). Pub. Res. Code § 21091(d). The FEIR must include a "detailed" written response to all "significant environmental issues" raised by commenters. As the court stated in *City of Long Beach v. LA USD* (2009) 176 Cal.App.4th 889, 904:

> The requirement of a detailed written response to comments helps to ensure that the lead agency will fully consider the environmental consequences of a decision before it is made, that the decision is well informed and open to public scrutiny, and that public participation in the environmental review process is meaningful.

The FEIR's responses to comments must be detailed and must provide a reasoned, good faith analysis. CEQA Guidelines § 15088(c). Failure to provide a substantive response to comment render the EIR legally inadequate. *Rural Land Owners Assoc. v. City Council* (1983) 143 Cal.App.3d 1013, 1020.

The responses to comments on a draft EIR must state reasons for rejecting suggested mitigation measures and comments on significant environmental issues.

"Conclusory statements unsupported by factual information" are not an adequate response. CEQA Guidelines §§ 15088(b), (c); *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3rd 348. The need for a substantive, detailed response is particularly appropriate when comments have been raised by experts or other agencies. *Berkeley Keep Jets*, 91 Cal.App.4th at 1367; *People v. County of Kern* (1976) 62 Cal.App.3d 761. A reasoned analysis of the issue and references to supporting evidence are required for substantive comments raised. *Calif. Oak Found. v. Santa Clarita* (2005) 133 Cal.App.4th 1219.

Response to Comment No. 2-3

The comment states several CEQA sections and case law, but does not identify a specific environmental issue or information addressed or contained in the Draft and Final EIR. As such, no further response is warranted. However, this comment is noted, and will be presented to the decision makers for their review and consideration.

Comment No. 2-4

III. DISCUSSION

A. The City Unduly Restrains the Project's Alternatives and Their Implementation.

An overly narrow definition of project objectives renders the alternatives analysis inadequate. To narrowly define the primary "objective" of the proposed project itself constitutes a violation of CEQA since such a restrictive formulation would improperly foreclose consideration of alternatives. See, *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, holding that when project objectives are defined too narrowly an EIR's treatment of analysis may also be inadequate. As a leading treatise on CEQA compliance cautions, "[t]he case law makes clear that…overly narrow objectives may unduly circumscribe the agency's consideration of project alternatives." Remy, Thomas, Moose & Manley, Guide to CEQA (Solano Books, 2007), p. 589.

CEQA prohibits a project sponsor from limiting its ability to implement the project in a way that precludes it from implementing reasonable alternatives to the project. *See Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 736 (alternatives may not be artificially limited by applicant's prior contractual commitments that would prevent sponsor from implementing reasonable alternative). The fact that a proposed alternative does not meet all of the Project Objectives is not an appropriate basis to eliminate impact-reducing project alternatives from analysis in an EIR. (14 Cal. Code Regs § 15126.6(c), (f)).

The EIR identifies several significant environmental impacts the Project will have, as well as the project alternatives that alleviate these impacts. Yet the City failed to impose a project alternative that would reduce environmental impacts because they do not meet all of the Project's stringent objectives. For example, Alternative 5 would avoid the Project's significant and unavoidable impacts to historical resources, associated with air quality standards, and related to construction noise. DEIR, p. V-205. However, this alternative was not selected in part because it did not meet all of the uses identified

in the Project's objectives, and would not meet the objective to restore portions of the existing buildings "to the same extent as under the Project." DEIR, p. V-206. Additionally, Alternative 4 was not selected, although it would lessen or reduce the significant and unavoidable impacts to historical resources, air quality standards, and construction noise, because while it "would meet the Project's underlying purpose and primary objective . . . it would not *fully meet* the Objective's intent to provide publicly accessible open space and amenities *to the same extent* as the Project . . . ." DEIR, p. V-166–V-167.

By refusing to select a Project alternative that mitigates or reduces the Project's significant environmental impacts simply because the alternative does not entirely meet the narrowly defined Project objectives, the City has violated CEQA.

Response to Comment No. 2-4

The commenter claims that the Project objectives are overly narrow and unduly constrain the alternatives analysis as provided in Chapter V, *Alternatives*, of the Draft EIR. The commenter further states that the Draft EIR violates CEQA by not selecting an alternative that would reduce the Project's significant impacts.

Pursuant to *CEQA Guidelines* Section 15126.6(a), an EIR must describe a "range of reasonable alternatives." Furthermore, pursuant to *CEQA Guidelines* Section 15126.6(f), an EIR must consider "only those alternatives necessary to permit a reasoned choice." Every conceivable alternative need not be considered; rather, the range of alternatives should be designed to foster informed decision-making and public participation (*CEQA Guidelines* sections 15126.6(a), 15126.6(f)). The lead agency (in this case the City of Los Angeles) is responsible for selecting the range of project alternatives for examination. In the case of this Project, the Draft EIR included a reasonable range of five alternatives, including the No Project Alternative. Each of the alternatives analyzed in Chapter V, *Alternatives*, of the Draft EIR would reduce the Project's significant impacts, and two of the alternatives (Alternatives 1 and 5) would avoid the Project's significant and unavoidable impacts with respect to construction air quality and noise and cultural resources. However, only Alternative 1, the No Project Alternative, would avoid all of the Project's significant and unavoidable traffic impacts.

Along with the environmental analysis for each alternative, the Draft EIR also considered whether and to what extent the alternatives would meet the Project objectives, as detailed in Chapter II, *Project Description*, of the Draft EIR. The Draft EIR concluded that Alternative 1 would not meet any of the Project objectives. It concluded that Alternative 5, the environmentally superior alternative, would not meet the underlying purpose and primary objective of the Project to develop the Project Site with a transit-oriented development that includes residential uses, community-serving commercial uses, and publicly accessible and private open space and amenities, or the Project's objectives that primarily concern high-density residential uses in proximity to transit and jobs-rich centers, or the creation of architecturally distinctive new buildings that contribute to the visual character of the Downtown. In addition, Alternative 5 would not support local and regional land use and housing policies to the same degree as the Project or Alternatives

2, 3, and 4, relative to the concentration of development in established urban areas served by transit.

Therefore, contrary to the comment, the Draft EIR does not reject any alternative, but is consistent with CEQA as it provides the City's decision makers with the information necessary to make an informed decision regarding the Project and the alternatives.

Comment No. 2-5

B. The EIR Fails to Adequately Analyze Historic and Cultural Aesthetic Impacts.

The site of the proposed Project includes five historical resources, including the Times, Plant, Mirror, and Executive buildings, as well as the parking structure. Despite these resources, the City asserts Senate Bill (SB) 743 applies to the Project and therefore the Project's aesthetic impacts are not considered significant impacts on the environment. DEIR, p. II-13–14. It makes this finding despite a subsection of SB 743 that excludes impacts to historical resources from this aesthetic exemption.

Codified within CEQA section 21099 et seq., SB 743 states "[a]esthetic . . . impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." Pub. Res. Code § 21099(d)(1). However, the City is incorrect in concluding it is exempt from analyzing all aesthetic impacts caused by the Project because SB 743 goes on to state that for the purposes of this section, "aesthetic impacts do not include impacts on historical or cultural resources." Pub. Res. Code § 21099(d)(2)(B). The City therefore cannot use SB 743 as an excuse to not mitigate aesthetic impacts to historical resources that are significant.

CEQA gives historic resources special recognition. *See Friends of Sierra Madre v. City of Sierra Madre* (2001) 25 C4th 165, 186; Citizens for a Sustainable Treasure Island v. City & County of San Francisco (2014) 227 Cal. App. 4th 1036, 1065. Objects of historical significance fall within CEQA's definition of "environment." Pub. Res. Code § 21060.5. Therefore, if a project has significant impacts on a historical resource, it has significant environmental impacts.

A substantial adverse change of a historical resource is considered a significant impact on the environment. CEQA Guidelines § 15064.5(b). Substantial adverse changes include "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings" resulting in the significance of the resource being "materially impaired." CEQA Guidelines §15064.5(b)(1). Material impairments of historical resources occur when the project demolishes or adversely materially alters the physical characteristics of the historical resource that either conveys its historical significance and that justify its inclusion in or eligibility for inclusion in the California Register of Historical Resources or the local register of historical resources. *Id*. §§ 15064.5(b)(2)(A)–(C). These material impairments clearly include aesthetic changes to historical resources because physical characteristics of historical resources encompass the façade and structural design of these resources.

Here, the Project proposes to demolish the Executive Building and the accompanying parking structure. Since both structures are eligible for inclusion in the California Register of Historic Resources and their physical characteristics that make them eligible for such listing will be demolished, the Project will result in a material impairment of these historical resources.

Additionally the Times, Plant, and Mirror Buildings are included in the local register of historic resources and are in the immediate surroundings of the Executive Building and parking structure. If the Project moves forward as planned, the impacts on the aesthetic quality of these buildings will be significant because the demolition of the Executive Building and parking structure will make room for two very large apartment buildings that will dwarf the Times, Plant, and Mirror Buildings and minimize the visibility of these historic resources.

Therefore, the Project will have significant adverse impacts on the aesthetics of historical resources and the City cannot use SB 743 as an excuse to not analyze these impacts. The City is required to analyze and mitigate these significant impacts.

Response to Comment No. 2-5

The commenter asserts that the Project's significant impacts to historic resources due to demolition of the Executive Building and parking structure also constitute significant aesthetic impacts. As stated on page IV.A-1 of Section IV.A, *Aesthetics*, of the Draft EIR, and in Response to Comment No. 9-3 in the Final EIR, Senate Bill (SB) 743, codified within the California Environmental Quality Act (CEQA) Section 21099 et. seq., states that "Aesthetic (…) impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." (Public Resources Code [PRC] Section 21099(d)(1)). As the Project would meet these conditions, aesthetic impacts associated with the Project would not be considered significant as a matter of law. In addition, City of Los Angeles Zoning Information File No. 2452 (ZI No. 2452) states that projects meeting SB 743 criteria are exempted from a determination of significant impacts on aesthetic resources (scenic vistas, scenic resources, aesthetic character, and light and glare) as outlined in CEQA Appendix G. Therefore, the Project would not have a significant aesthetic impact because of the significant impacts to historic resources identified in the EIR.

The commenter misconstrues PRC Section 21099(d)(2)(B), which states that, "For purposes of this subdivision, aesthetic impacts ***do not include*** impacts on historical or cultural resources." (Emphasis added.) The language provided in PRC Section 21099(d)(2)(B) provides that impacts to historic or cultural resources are not considered to be (i.e., not included as) aesthetic impacts.

Comment No. 2-6

C. The City Failed to Make Full and Accurate Responses to Comments Concerning Aesthetic Impacts to Historical Resources.

While public participation is an essential part of the CEQA process, so is an agency's evaluation and response to public comments. Failure to comply with the requirement can lead to disapproval of a project. CEQA Guidelines Discussion, § 15088. An agency's responses to comments must specifically explain the reasons for rejecting suggestions received in comments and for proceeding with a project despite its environmental impacts. Such explanations must be fully supported with specific references to empirical information, scientific authority, and/or explanatory information. *Cleary v. County of Stanislaus* (1981) 118 Cal.App.3d 348, 357. The responses, moreover, must manifest a good faith, reasoned analysis; conclusory statements unsupported by factual information will not suffice. *People v. County of Kern* (1974) 39 Cal.App.3d 830, 841.

Here, the City continued to hide behind SB 743 when it responded in a cursory and inadequate way to a comment regarding the inadequacy of the EIR's analysis of aesthetic impacts on historical resources. *See* FEIR, p. 2-80–2-81. The City again pointed to SB 743 to assert that "the Project would result in the removal of the existing Executive Building and the parking structure, which are historic resources and, as such, may be considered to contribute to the aesthetic character under the [Los Angeles CEQA] Thresholds Guide. However, per ZI No. 2452 [which adopted SB 743], aesthetic impacts shall not be considered a significant impact for a qualifying mixed-use project in a Transit Priority Area, such as the Project." FEIR, p. 2-81.

This response, as identified in the section above, is incorrect and erroneous because the City's reliance on SB 743 is inappropriate given the reading of the entire section, which requires agency's to still consider aesthetic impacts to historical resources.

The City's response is legally inadequate because its analysis is based on a select reading of SB 743 and ignores the rest of the statute excluding historical resources from the aesthetic impact exemption. This inadequate and conclusory response to a comment fails to meet CEQA's requirements. Responses such as this require the City to revise its EIR so that it fully evaluates and responds to public comments**.**

Response to Comment No. 2-6

The commenter states that the Final EIR is incorrect and that the City cannot rely on SB 743 to dismiss an aesthetic impact on historical resources. As described above under Response to Comment 2-5, the commenter misconstrues PRC Section 21099(d)(2)(B), which states that, "For purposes of this subdivision, aesthetic impacts ***do not include*** impacts on historical or cultural resources." (Emphasis added.) The language provided in PRC Section 21099(d)(2)(B) provides that impacts to historic or cultural resources are not considered to be (i.e., not included as) aesthetic impacts. The Final EIR clearly and fully responds to the comments. The commenter merely states its disagreement with the responses based on a misconception of SB 743.

Comment No. 2-7

D. The Project May Have Significant Impacts on Special-Status Birds as a Result of Window Collisions.

Dr. Smallwood indicates that the Project, as proposed, will result in significant impacts on birds colliding with the Project's clear glass windows. Ex. A, p. 8. Specifically, Dr. Smallwood predicts "2,310 bird deaths per year" due to the Project. *Id*. Project illustrations show extensive use of glass in the facades of the Project's buildings. "[T]he project's façades would support at least 30,000 m^2 of glass windows . . . ." Ex. A, p. 1. "Adding to collison hazards would be the abundant use of window recessing, over-window balconies, between-building interior spaces, and as depicted in the EIR, use of transparent glass and abundant interior lighting at night." *Id*. Making matters worse, the Project, with these potentially harmful features, is proposed to be constructed where eBird records indicate "43 special-status species of birds occur near the site . . . 14 of which were seen on property immediately adjacent to the site." Ex. A, p. 2.

Despite emerging scientific literature about window collisions as one of the largest sources of avian mortality worldwide, the City and the EIR do not assess this potential impact. Additionally, the EIR "provides no analysis of cumulative impacts on birds caused by window collisions in the City, nor any analysis of the proposed project's contribution to cumulative impacts of window collisions. An RDEIR is required to fully analyze and mitigate these impacts.

In order to mitigate these potential impacts to birds, Dr. Smallwood recommends the following mitigation measures:

- Marking windows
- Managing outdoor landscape vegetation
- Managing indoor landscape vegetation
- Managing nocturnal lighting
- Designing to minimize transparency through two parallel facades
- Designing to minimize views of interior plants
- Landscaping to increase distances between windows and trees and shrubs

Dr. Smallwood also suggests adherence to available guidelines on building design intended to minimize collision hazards to birds, such as those by the American Bird Conservancy ("ABC"). Ex., p. 13. ABC recommends: (1) minimizing use of glass; (2) placing glass behind some type of screening (grilles, shutters, exterior shades); (3) using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) turning off lights during migration seasons. *Id.*

Here, there is ample evidence to support a fair argument that the Project will result in many collision fatalities of birds, and that this may result in a significant impact. Yet the EIR makes no attempt to analyze this potentially significant impact. An RDEIR is required to fully analyze and mitigate this impact.

Response to Comment No. 2-7

The commenter claims that the Project may have a significant impact on biological resources as a result of avian window collisions and provides a memorandum to support their conclusion. However, the information provided in this memorandum is speculative and lacks any credible Project- or site-specific evidence. Refer to Response to Comments 2-16 through 2-27 for responses to the memorandum.

Comment No. 2-8

E. The Project's Emissions Were Improperly Analyzed Because the EIR Uses Incorrect and Unsubstantiated Input Parameters.

Environmental consulting firm SWAPE reviewed the EIR. SWAPE found that the EIR's air quality model contained incorrect and unsubstantiated input parameters. As a result, the EIR's air model may have underestimated emissions and cannot be relied upon as substantial evidence to determine that the Project's impacts will be less than significant. SWAPE's analysis can be found in Exhibit B, pages 1-10.

Response to Comment No. 2-8

The Project's emissions modeling provided in the Draft EIR does not underestimate emissions associated with the Project's construction and operational activities. The Project's CalEEMod output files, provided in Appendix C to the Draft EIR, contain input values that are consistent with information disclosed in the Draft EIR and in some cases slightly more conservative in order to ensure that the Project's potential air quality impacts are disclosed. As a result, the Project's construction and operational emissions are not underestimated, and the EIR adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality. Refer to Responses to Comments 2-30 through 2-38 for responses to the specific items raised in the comments regarding the Project's CalEEMod input parameters and output files.

Comment No. 2-9

F. The FEIR Fails to Adequately Respond to Comments Concerning Mitigation Measures for Construction Air Quality Impacts.

The Project will have significant impacts on air quality. However, the FEIR refuses to impose feasible mitigation measures that would reduce these impacts.

Expert agency South Coast Air Quality Management District ("SCAQMD") submitted a letter requesting that the City require the use of zero-emission ("ZE") or near-zero emission ("NZE") on-road haul trucks and require that construction vendors, contractors, and/or haul truck operators commit to using 2010 model year or newer engines that meet the California Air Resources Board's ("CARB") 2010 engine

emissions standards. FEIR, p. 2-10–2-11. The FEIR refuses to require these mitigation measures, rejecting them for impracticality and unfeasibility reasons, and because it already has to comply with CARB's 2008 Truck and Bus Regulation. FEIR, p. 2-20–2-21.

First, the FEIR references a handful of reports to conclude that the use of ZE and NZE trucks is not feasible at this time. *Id*. However, the FEIR does not mention how many ZE or NZE trucks are in fact available, just that there are barriers to widespread availability of them and their required infrastructure at this time, and that a fleet wouldn't likely be available during the project. *Id*. SCAQMD also suggested the City require this mitigation measure as part of the bid or contract specification. FEIR, p. 2-18. The City fails to respond to this suggestion, despite the contractors' likely greater knowledge of the availability of these vehicles than the City. The FEIR is also quick to note that the Project would exceed NOx emissions during construction for up to four days when a continuous pour would be used for the two foundations. FEIR, p. 2-21. The FEIR cannot rely on this limited time frame in which NOx emissions will be significant. It must adopt feasible mitigation measures that will bring the impacts below a significance level no matter how short the impact will last. The City's excuses for failing to adopt this mitigation measure are conclusory and cannot be used to support a finding of infeasibility.

Second, the FEIR states that it already requires compliance with CARB's 2008 Truck and Bus Regulation, which reduces NOx, PM10, and PM2.5 emissions from existing diesel vehicles operating in California so it does not believe that a mitigation measure requiring the use of CARB's 2010 engine emission standards. FEIR, p. 2-21. Requiring this additional mitigation measure could likely assist in reducing significant air quality impacts, and just because another mitigation measure would similarly reduce significant air quality impacts, does not make the additional mitigation measure infeasible. Therefore, the City's excuse for failing to adopt this mitigation measure is also conclusory and it must adopt the mitigation measure if feasible.

The FEIR's failure to implement SCAQMD's suggested mitigation measures to reduce the significant impacts on air quality fails to meet CEQA's requirements and the City must implement them.

Response to Comment No. 2-9

The Lead Agency considered mitigation measures to reduce the air quality impact associated with the temporary and short-term construction NO_X emissions during the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days, but ultimately determined they would not be feasible to reduce the significant and unavoidable air quality impact.

The emissions associated with the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days, are overwhelmingly the result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. The Lead Agency considered the use of zero emissions (ZE) and near zero emissions (NZE) trucks as part of the Final EIR. Response to Comment 4-9 of the

Final EIR contains a detailed explanation of why ZE and NZE concrete trucks would not be commercially available for use during Project construction. The commenter provides no credible evidence to the contrary. Construction of the Project is expected to occur over approximately four years, with the air quality emissions modeling analysis assuming construction in late 2018 to late 2022, and a full operational year of 2023.[1] However, even when adjusting the construction dates to 2020 to 2024, according to the reports cited below, there would not be enough commercially available ZE and NZE concrete truck fleets and/or infrastructure to accommodate the use of ZE and NZE technology for the Project. According to a Feasibility Assessment for Drayage Trucks for the San Pedro Bay Ports Clean Air Action Plan, ZE and NZE on-road haul trucks availability, as of late-2018, includes one ZE and one NZE fuel-technology platform sold by Original Equipment Manufacturers (OEMs) in commercially available Class 8 trucks (which include concrete trucks) suitable for Port use.[2,3] With the development of ZE and NZE platforms, infrastructure has emerged as one of the most significant near-term barriers to wide-scale adoption of these technologies due to standardization difficulties and the ability to develop the full charging infrastructure over the next several years. Additionally, according to the Feasibility Assessment, one OEM plans to begin offering a ZE battery-electric Class 8 truck by 2021, the other OEMs have similar or later timeframes. None will have readily available fleets in time for Project construction use, in particular for the Project's specific need for many concrete trucks over a short duration[4]. Thus, while the SCAQMD suggested the City require this mitigation measure as part of the bid or contract specification, because the measure is not feasible given the lack of availability, as discussed above, it would also not be feasible to include it as a requirement for contractor bids.

The International Council on Clean Transportation (ICCT) in a November 2017 white paper titled "Transitioning to Zero-Emission Heavy-Duty Freight Vehicles"[5] states that there are "prevailing barriers to widespread viability" of plug-in electric heavy-duty freight vehicles, primarily limited electric range, high vehicle cost, long recharging time, and tradeoffs on cargo weight and/or volume. This report does not cite heavy-duty Class 8 trucks with a gross vehicle weight rating (GVWR) greater than 33,001 pounds, which are similar to the GVWR of the heavy-duty concrete trucks that would be used for the

1 As noted in on page IV.B-31 of Section IV.B, *Air Quality*, of the Draft EIR, "If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein." Please refer to the Errata.

2 Port of Long Beach & The Port of Los Angeles, San Pedro Bay Ports Clean Air Action Plan, 2018 Feasibility Assessment for Drayage Trucks, April 2019, http://www.cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/. Accessed June 4, 2019.

3 Class 8 trucks means any in-use on-road vehicle with a gross vehicle weight rating (GVWR) greater than 33,001 pounds, which includes concrete trucks. See: https://afdc.energy.gov/data/10380.

4 Letter dated February 28, 2020 attached as Appendix D.

5 Moultak, M., Lutsey, N., Hall, D., Transitioning to Zero-Emission Heavy-Duty Freight Vehicles, The International Council on Clean Transportation (ICCT), September 26, 2017, http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks_ICCT-white-paper_26092017_vF.pdf. Accessed November 19, 2019.

Project, as a promising segment for widespread commercialization. As stated in the white paper, there are "barriers to the growth of electric and hydrogen fuel cell heavy-duty commercial freight trucks include limited technology availability, limited economies of scale, long-distance travel requirements, payload mass and volume constraints, and a lack of refueling and recharging infrastructure."[6] The white paper also states that technologies analyzed are all in research, exploratory, and early demonstration phases. Thus, this report further demonstrates that the ZE and NZE truck fleet would not be viable during construction of the Project.

Furthermore, a recent report by Next 10[7] concludes that California will meet or exceed its 1.5 million by 2025 ZEV goal, primarily through automobiles, but that the state's charging infrastructure is not keeping pace with the growth of its electric vehicle fleet. Through October 2017, more than 337,000 ZEVs had been sold in California, and ZEV sales increased 29.1 percent in California over the previous year. Meanwhile, California has 16,549 public and nonresidential private sector charging outlets - most in the nation by far but only 0.05 public charging outlets per ZEV. Studies show that California will need 125,000 to 220,000 charging ports from private and public sources by 2020 in order to provide adequate infrastructure. The charging stations for EV, especially heavy-duty concrete trucks, are not readily available and would not support the amount of heavy-duty concrete trucks required for the Project.

As demonstrated above, the EV and NEV heavy-duty truck fleet is not readily available at this time, nor would it likely be available within the timeframe for construction of the Project. Since there is not a large percentage of the Class 8 fleet utilizing EV or NEV technology, requiring the Project to utilize EV or NEV trucks as a mitigation measure is not feasible or practicable, in particular for the Project's specific need for many concrete trucks over a short duration for the two-day concrete pour for each tower. Additionally, as stated above, the Project would only exceed the SCAQMD numeric indicators for a short time, up to four days, during the concrete pours for the foundations. Thus, the Final EIR correctly determined the use of EV or NEV technology as a mitigation measure is not feasible, i.e., "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors". CEQA Guidelines Section 15364.

In addition, the Lead Agency considered a mitigation measure requiring 2010 model year or newer engines. As discussed in the Response to Comment 4-9 of the Final EIR, the Lead Agency does not believe that a mitigation measure requiring 2010 model year or newer engines is necessary because this is already required through the CARB 2008 Truck and Bus Regulation. As discussed on page IV.B-5 in Section IV.B, *Air Quality*, of the Draft EIR, "In 2008, CARB approved the Truck and Bus regulation to reduce NO_X, PM10, and PM2.5 emissions from existing diesel vehicles operating in California (13 CCR, Section 2025)." The regulation requires that trucks with a gross vehicle weight

6 Moultak, M., Lutsey, N., Hall, D., Transitioning to Zero-Emission Heavy-Duty Freight Vehicles, The International Council on Clean Transportation (ICCT), September 26, 2017, http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks_ICCT-white-paper_26092017_vF.pdf. Accessed November 19, 2019.

7 Next 10, The Road Ahead for Zero-Emission Vehicles in California: Market Trends & Policy Analysis, January 2018.

rating greater than 26,000 pounds, which includes heavy-duty trucks that would be used during Project construction, meet 2010 engine standards, or better. The regulation is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this requirement would meet or exceed the 2010 engine emission standards for NO_X and diesel particulate matter by 2023. Truck fleet operators are required to report compliance with the regulation in accordance with CARB's reporting procedures for the Truck Regulation Upload, Compliance and Reporting System (TRUCRS).[8]

Nonetheless, the Lead Agency has conservatively added the following subparagraph d. to MM AQ-1 to ensure the maximum use of 2010 model or newer engines during the concrete pouring foundation phases:

> d. All concrete trucks used during the Project's concrete pouring foundation shall have 2010 model or newer engines. Prior to issuance of a building permit, the applicant shall provide evidence (such as copies of contracts with concrete subcontractors with specifications or engine certifications) satisfactory to the Department of City Planning demonstrating compliance with this measure.

However, this added measure would not reduce the NOx emission levels during the concrete pouring phases to below the applicable significance threshold, and impacts would remain significant.[9]

There are no feasible mitigation measures that would reduce the construction NO_X emissions impact associated with the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days as a result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. Because the Project's only significant impact for air quality is related to this specific construction activity, it is appropriate to consider measures that would feasibly reduce the impact for this activity. As there are no feasible measures, the Lead Agency determined the impact for this specific portion of construction activity to be significant and unavoidable.

Comment No. 2-10

G. Updated Air Quality Model Demonstrates That the Project Will Have Significant Air Quality Impacts From Greenhouse Gas Emissions.

SWAPE found that there would be significant greenhouse gas emissions despite the EIR's finding that the Project's greenhouse gas emissions would be less than significant. As a result, the City must prepare a RDEIR which takes into account SWAPE's findings and analyze and mitigate this significant impact. SWAPE's analysis and mitigation measures can be found in Exhibit B, pages 23-33.

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8 California Air Resources Board, Welcome to the Truck Regulation Upload, Compliance and Reporting System (TRUCRS), https://ssl.arb.ca.gov/ssltrucrstb/trucrs_reporting/login.php. Accessed July 7, 2019.

9 The Project's construction emissions during the concrete pouring foundation phases with the above measure are provided in Appendix A to the Errata.

Response to Comment No. 2-10

The commenter asserts that the less-than-significant impact finding for GHG emissions is incorrect and unsubstantiated. State CEQA Guidelines Section 15064.4 states that a lead agency shall make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency has the discretion to determine, in the context of a particular project, whether to: (1) quantify greenhouse gas emissions resulting from a project; and/or; or (2) rely on a qualitative analysis or performance based standards. The City has exercised its discretion to utilize qualitative thresholds, which are stated on page IV.E-38, and fully explained on pages IV.E-36 through -38 of Section IV.E, *Greenhouse Gas Emissions*, of the Draft EIR. The statement in the comment that the Project's GHG emission impacts would be significant is incorrect and unsubstantiated.

Comment No. 2-11

H. The Project Will Have a Significant Construction-Related Health Risk Impact That Has Not Been Adequately Analyzed or Mitigated.

SWAPE found that the EIR failed to conduct both a construction and operational health risk assessment. Without such an analysis, the EIR fails to include substantial evidence that the Project's emissions will be less than significant. Additionally, SWAPE has suggested several mitigation measures to reduce emission impacts to less than significant levels. SWAPE's analysis and mitigation measures can be found in Exhibit B, pages 12-23.

Response to Comment No. 2-11

The commenter maintains that the EIR should have included both a construction and operational health risk assessment of Project's toxic air contaminant (TACs) emissions. Section IV.B, *Air Quality*, pages IV.B-69 through IV.B-71 of the Draft EIR analyze and disclose the potential for the Project to cause adverse health impacts from exposure to TACs from the Project's construction and operational emissions consistent with CEQA Guidelines Section 15126.2(a). As discussed therein, with respect to Project construction, the Project would be consistent with applicable South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan strategies intended to reduce emissions from construction equipment and activities, which include the use of cleaner construction equipment. The Project would comply with regulatory mandates including the California Air Resources Board (CARB) Air Toxic Control Measure that limits idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation for the use of cleaner construction equipment. Consistent with and supportive of the goals of these regulatory mandates to minimize emissions and exposure to emissions, the Project would include emissions controls agreed upon by the City and the Applicant that will be full enforceable by the City, as per MM-AQ-1.

Page IV.B-37 of Section IV.B, *Air Quality*, of the Draft EIR states that the SCAQMD has not adopted guidance that requires quantitative health risk assessments be performed for short-term exposures to TAC emissions. Specifically, the SCAQMD states that "SCAQMD currently does not have guidance on construction Health Risk

Assessments."[10] As disclosed in the Draft EIR on page IV.B-37, health effects from TACs for sensitive residential receptors are described in terms of individual cancer risk based on a long-term resident exposure duration (i.e., resident lifetime or 70-year). Given the temporary and short-term construction schedule (approximately 48 months), the Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of Project construction. Therefore, a construction HRA is neither required nor warranted.

The SCAQMD has published and adopted the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). The Project would not include any of these uses; therefore, an operational HRA is neither required nor warranted.

Although a quantitative HRA for the Project is not required for the reasons discussed above, in order to provide information that further supports the Draft EIR's less than significant finding with respect to TAC emissions, a quantitative health risk assessment has been prepared and is attached as Appendix A, Health Risk Assessment Calculations, of this response letter. As discussed in further detail in Responses to Comment Nos. 2-39 and 2-40, the results of the quantitative HRA demonstrate that the health risks from TAC emissions from Project construction and operations would not exceed the SCAQMD significance threshold. This HRA further confirms the Draft EIR's less than significant impact finding with respect to TAC emissions.

Comment No. 2-12

I. The EIR Fails to Accurately Disclose and Analyze Traffic Impacts.

Traffic expert found multiple deficiencies in the EIR's traffic analysis. As such, the EIR has failed to adequately disclose, discuss, and analyze the Project's impacts on traffic. Mr. Smith's analysis can be found in Exhibit C.

Response to Comment No. 2-12

The commenter claims that the traffic analysis fails to adequately disclose, discuss, and analyze the Project's impacts on traffic. Detailed responses to Exhibit C are provided in Responses to Comment Nos. 2-55 through 2-68 below.

[10] South Coast Air Quality Management District, Final Environmental Assessment for: Proposed Amended Rule 307.1 – Alternative Fees for Air Toxics Emissions Inventory; Proposed Amended Rule 1401 – New Source Review of Toxic Air Contaminants; Proposed Amended Rule 1402 – Control of Toxic Air Contaminants from Existing Sources; SCAQMD Public Notification Procedures for Facilities Under the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) and Rule 1402; and, SCAQMD Guidelines for Participating in the Rule 1402 Voluntary Risk, page 2-23, September 2016, http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2016/final-ea_par-307-1_1401_1402.pdf?sfvrsn=4. Accessed December 30, 2019. The SCAQMD only applies the revised OEHHA Guidelines for operational impacts at stationary industrial source facilities that are in the AB 2588 Air Toxics Hot Spots program, which does not apply to the proposed Project.

Comment No. 2-13

J. The EIR Fails to Address the Potential Significant Indoor Air Quality Impacts on the Health of Future Residents of the Project.

Formaldehyde is a known human carcinogen. Many composite wood products typically used in residential and office building construction contain formaldehyde-based glues which off- gas formaldehyde over a very long time period. The primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and particle board. These materials are commonly used in residential and office building construction for flooring, cabinetry, baseboards, window shades, interior doors, and window and door trims. Given the prominence of materials with formaldehyde-based resins that will be used in constructing the Project and the residential buildings, there is a significant likelihood that the Project's emissions of formaldehyde to air will result in very significant cancer risks to future residents and workers in the buildings. Even if the materials used within the buildings comply with the Airborne Toxic Control Measures (ATCM) of the California Air Resources Board (CARB), significant emissions of formaldehyde may still occur.

The residential buildings will have significant impacts on air quality and health risks by emitting cancer-causing levels of formaldehyde into the air that will expose workers and residents to cancer risks well in excess of SCAQMD's threshold of significance. A 2018 study by Chan et al. (attached as Exhibit D) measured formaldehyde levels in new structures constructed after the 2009 CARB rules went into effect. Even though new buildings conforming to CARB's ATCM had a 30% lower median indoor formaldehyde concentration and cancer risk than buildings built prior to the enactment of the ATCM, the levels of formaldehyde will still pose cancer risks greater than 100 in a million, well above the 10 in one million significance threshold established by the SCAQMD.

Based on expert comments submitted on other similar projects and assuming all the Project's and the residential building materials are compliant with the California Air Resources Board's formaldehyde airborne toxics control measure, future residents and employees using the Project will be exposed to a cancer risk from formaldehyde greater than the SCAQMD's CEQA significance threshold for airborne cancer risk of 10 per million. Currently, the City does not have any idea what risk will be posed by formaldehyde emissions from the Project or the residences.

The City has a duty to investigate issues relating to a project's potential environmental impacts. *See County Sanitation Dist. No. 2 v. County of Kern*, (2005) 127 Cal.App.4th 1544, 1597–98. ["[U]nder CEQA, the lead agency bears a burden to investigate potential environmental impacts."]. "If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record.

Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences." *Sundstrom v. County of*

Mendocino (1988) 202 Cal.App.3d 296, 311. Given the lack of study conducted by the City on the health risks posed by emissions of formaldehyde from new residential projects, a fair argument exists that such emissions form the Project may pose significant health risks. As a result, the City must prepare a RDEIR which calculates the health risks that the formaldehyde emissions may have on future residents and workers and identifies appropriate mitigation measures.

Response to Comment No. 2-13

The commenter maintains that the Project would have a significant impact on indoor air quality due to formaldehyde. However, the commenter provides no credible evidence that the Project will be constructed with building materials with significant amounts of formaldehyde, citing only an unsubstantiated, general article provided in Exhibit D.

There are no requirements or guidance from SCAQMD or relevant agencies to evaluate such risk. The project does not represent a unique or special development that needs addressing in CEQA, therefore no special analysis or mitigation is required. The Project will comply with the existing codes and regulations in California, which adequately address potential emissions and risks from building materials to ensure safe practices and healthy indoor air. These codes include:

a. Title 24: The Building Energy Efficiency Standards (Energy Standards) already address the “energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, and alterations to existing buildings”. The Standards are applicable to Mechanical Systems whose one of the primary functions is “indoor air quality for occupant comfort and health”. These Standards addresses ventilation, indoor air quality, and air filtration requirements (including the use of high efficiency filters), the checks and balances and need to be performed, and the acceptance test requirements. One of the General Envelope Requirements is that manufacturers must certify that insulating materials comply with the California Quality Standards for Insulating Materials to assure that “insulation sold or installed in the state performs according to the stated R-value and meets minimum quality, health, and safety standards.”

b. CALGreen : The California Green Building Standards Code (CALGreen Code), applicable to new commercial and industrial buildings, is designed to promote “environmentally responsible, cost-effective, healthier places to live and work”. “CALGreen includes both required measures and voluntary measures, a number of which help assure healthful indoor air quality, such as those addressing chemical emissions from composite wood products, carpets, resilient flooring materials, paints, adhesives, sealants, and insulation, and also ventilation.”

Section 4.5, Environmental Quality, of the CALGreen Code provides mandatory residential measures to reduce the quantity of air contaminants that are odorous, irritating and/or harmful to the comfort and wellbeing of a building’s installers, occupants and neighbors. It includes VOC limits for paints, coatings, adhesives, adhesive bonding primers, sealants, sealant primers, and caulk. Section 4.504.3, Carpet Systems, of the CALGreen Code establishes product requirements to meet one of the following: (1)

Carpet and Rug Institute's Green Label Plus Program; (2) California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1; (3) NSF/ANSI 140 at the Gold Level; or (4) Scientific Certifications Systems Indoor Advantage Gold. Furthermore, Section 4.504.5, Composite Wood Products, of the CALGreen Code establishes limits for formaldehyde as specified in ARBS's Air Toxics Control Measure for Composite Wood (e.g., particle board). These measures have been established through the CALGreen Code and are designed to reduce the quantity of air contaminants to acceptable levels.

c. CARB ATCM (Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products) : The purpose of this airborne toxic control measure is to "reduce formaldehyde emissions from composite wood products, and finished goods that contain composite wood products, that are sold, offered for sale, supplied, used, or manufactured for sale in California. The composite wood products covered by this regulation are hardwood plywood, particleboard, and medium density fiberboard." The measure applies to manufacturers, distributors, importers, fabricators (that use such materials to make other goods), retailers, third party certifiers who manufacture, offer for sale or supply these goods in California. The control measure assures that all building materials and furnishings manufactured, distributed, imported and used in new construction in California meet the maximum allowable concentrations that assure healthful indoor air quality.

According to CARB, from a public health standpoint, the CWP Regulation's emission standards are set at low levels intended to protect public health.[11] The CWP Regulation, adopted in 2007, established two phases of emissions standards: an initial Phase I, and later, a more stringent Phase 2 that requires all finished goods, such as flooring, destined for sale or use in California to be made using complying composite wood products. As of January 2014, only Phase 2 products are legal for sale in California. Thus, all new wood products installed in the Project would comply with the more stringent Phase 2 requirements. Impacts with respect to formaldehyde would be less than significant.

Comment No. 2-14

IV. THE CITY SHOULD PREPARE AND RECIRCULATE A REVISED DEIR

A revised draft environmental impact report ("RDEIR") should be prepared and circulated for full public review to address the impacts identified above and to propose feasible mitigation measures. CEQA requires re-circulation of an EIR when significant new information is added to the EIR following public review but before certification. (Pub. Res. Code § 21092.1.) The CEQA Guidelines clarify that new information is significant if "the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project" including, for

[11] California Air Resources Board, Frequently Asked Questions for Consumers, Reducing Formaldehyde Emissions from Composite Wood Products, https://ww3.arb.ca.gov/toxics/compwood/consumer_faq.pdf?_ga=2.32900281.682464648.1573169874-1026610208.1565143819. Accessed November 2019.

example, “a disclosure showing that . . . [a] new significant environmental impact would result from the project.” (14 CCR § 15088.5.) The above significant environmental impacts have not been analyzed in the EIR and must be addressed in an RDEIR that is re-circulated for public review.

Response to Comment No. 2-14

The commenter requests that the Draft EIR be recirculated. As set forth above and throughout these responses, the commenter does not provide credible evidence that the Project would result in new or substantially increased impacts, that there is significant new information, or that any of the other criteria for recirculation under *CEQA Guidelines* Section 15088.5 has been met. Therefore, recirculation of the Draft EIR is not required.

Comment No. 2-15

V. CONCLUSION

For the foregoing reasons, SAFER believes that the Times Mirror Square DEIR and FEIR are wholly inadequate. SAFER urges the Hearing Officer and Advisory Agency to refrain from certifying the FEIR or recommending approval of the Times Mirror Square Project in order to allow staff additional time to address the concerns raised herein. Thank you for considering our comments and please include this letter in the record of proceedings for this project.

Response to Comment No. 2-15

This comment is a conclusion to the comment letter. Detailed responses to the provided exhibits are provided below.

Comment No. 2-16

EXHIBIT A

Dear Mr. Lamborn,

I write to comment on the City of Los Angeles (2019a,b) DEIR and FEIR prepared for the Times Mirror Square Project, which I understand would add 1,135,803 ft^2 of construction floor space between a 37-story building and a 53-story building, and including 34,572 ft^2 of commercial floor space and 1,127 residential units on 3.6 acres of land. Assuming 25% of the buildings’ façades would be composed of steel or concrete, I estimate the project’s façades would support at least 30,000 m^2 of glass windows, which would pose collision hazards to birds. Adding to the collision hazards would be the abundant use of window recessing, over-window balconies, between-building interior space, and as depicted in the EIR, use of transparent glass and abundant interior lighting at night. I write to comment on bird-window collisions that would result from this project – a type of impact that is not addressed in the DEIR or FEIR.

Response to Comment No. 2-16

The comment provides a brief description of the Project as detailed in Chapter II, *Project Description*, of the Draft EIR and makes an assumption of the amount of steel or concrete that would comprise the Project's buildings' facades. This comment serves as a summary to the remainder of the comments. Responses to these comments are provided below in Responses to Comments 2-17 through 2-27.

Comment No. 2-17

My qualifications for preparing expert comments are the following. I hold a Ph.D. degree in Ecology from University of California at Davis, where I subsequently worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, habitat restoration, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I perform research on wildlife mortality caused by wind turbines, electric distribution lines, agricultural practices, and road traffic. I authored numerous papers on special-status species issues, including "Using the best scientific data for endangered species conservation" (Smallwood et al. 1999), and "Suggested standards for science applied to conservation issues" (Smallwood et al. 2001). I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I've been a part-time lecturer at California State University, Sacramento. I was Associate Editor of wildlife biology's premier scientific journal, The Journal of Wildlife Management, as well as of Biological Conservation, and I was on the Editorial Board of Environmental Management. I have performed wildlife surveys in California for thirty-three years, including at many proposed project sites. My CV is attached.

Response to Comment No. 2-17

This comment provides some background on the commenter. As this comment does not concern any information addressed or contained in the Draft EIR, no further response is required. However, this comment is noted and will be presented to the decision makers for their review and consideration.

Comment No. 2-18

BIOLOGICAL IMPACTS ASSESSMENT

Based on recent eBird records, 43 special-status species of birds occur near the site of the proposed project (Table 1), 14 of which were seen on property immediately adjacent to the site. Fifteen species have been known to collide with windows (Table 1). Many of these species are undoubtedly already experiencing annual mortality caused by window collisions in Los Angeles, but the proposed new project would substantially add window-collision hazards to birds flying over Los Angeles.

Table 1, which is provided on page 3 and 4 of Exhibit A of the letter, is not reproduced here and is provided within Appendix A of this response.

Response to Comment No. 2-18

The commenter states that 43 special-status species of birds occur near the site of the proposed Project and that 14 of these species were seen on a property immediate adjacent to the site. However, the commenter does not identify the property that is claimed to be immediately adjacent to the Project Site where these special-status species were seen. Nor does the commenter identify a radius for the eBird record search that was conducted. Typically, a 1-mile radius is applied to searches because this radius includes the immediate vicinity of the Project Site and the surrounding area that supports the same habitat type. The Project Site and vicinity are not known to be wildlife or migratory corridors or within a special-status species critical habitat. A one-mile search conducted on December 24, 2019 for avian species for the Project Site address within the eBird database from 1900 to November 2019, and as provided in Appendix B to this response letter, provided results that are representative of the total number of observations of the course of multiple years. The only listed species (federally endangered, federally threatened, state endangered, state threatened) are the white-tailed kite, which was only observed once in 2016 at the Walk Disney Concert Hall, and the Peregrine Falcon, which was observed 69 times from 1987 to 2019, with the most recent sighting in 2010 in Grand Park and is a species that have been documented to thrive in the urbanized/skyscraper landscape.[12] Furthermore, based on studies conducted on the East Coast, migrant passerine species are the most likely species to experience window collisions. However, based on the eBird database search, very few if any migrant passerine species are known to use the Project area as a migration corridor, and none of these species are considered candidate, sensitive, or special status species. Thus, the commenter does not provide credible evidence to support the assertion that the special-status avian species identified in Table 1 are dying from window collisions in downtown Los Angeles or even in southern California. Moreover, an isolated death of a sensitive species would not be sufficient to "have a substantial adverse effect . . . on any species identified as a candidate, sensitive, or special-status species …" which is the significance threshold for biological resources under Appendix G.

Comment No. 2-19

WINDOW COLLISIONS

Recent advances in structural glass engineering have contributed to a proliferation of glass windows on building façades. This proliferation is readily observable in newer buildings and in recent project planning documents, and it is represented by a worldwide 20% increase in glass manufacturing for building construction since 2016. Increasing window to wall ratios and glass façades have become popular for multiple reasons, including a growing demand for 'daylighting.' Not only is glass a major feature of the Times Mirror Square Project, but depictions in the EIR are of buildings gleaming in transparent glass in daylight and lit from the interior at night.

[12] Kauffman, Matthew J., Winifred F. Frick, and Janet Linthicum. "Estimation of habitat- specific demography and population growth for peregrine falcons in California." *Ecological Applications* 13.6 (2003): 1802-1816.

The EIR has not been prepared with the benefit of survey visits by wildlife biologists, so it inadequately informs the public about avian use of the area. Surveys are needed to learn how many of each bird species fly through the area and at what times of day (and night). Nocturnal surveys can be performed using a thermal-imaging camera or radar. Such surveys would inform of collision risk, and could inform mitigation strategies involving interior light management and design modifications to facades facing the prevailing approach directions of migrating birds. Below I review the bird-window collision issue, hypothesized causal factors and recommended mitigation solutions. I also predict bird-window collision rates based on studies performed across the USA at structures ranging widely in height, window-to-wall ratio, types of glass, orientation, and structural context. My aim is to make a robust prediction from this range of study conditions, and to present the associated large confidence interval that I believe is appropriate in the face of uncertainty over how many birds fly through the project area and what proportion of the birds are more susceptible that others to window collision.

Glass-façades of buildings intercept and kill many birds, but these façades are differentially hazardous to birds based on spatial extent, contiguity, orientation, and other factors. At Washington State University, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a three-story glass walkway (no fatality adjustments attempted). Prior to marking the windows to warn birds of the collision hazard, the collision rate was 84.7 per year. At that rate, and not attempting to adjust the fatality estimate for the proportion of fatalities not found, 4,235 birds were likely killed over the 50 years since the start of their study, and that's at a relatively small building façade (Figure 1). Accounting for the proportion of fatalities not found, the number of birds killed by this walkway over the last 50 years would have been about 12,705. And this is just for one 3-story, glass-sided walkway between two college campus buildings.

***Figure 1**. A walkway connecting two buildings at Washington State University where one of the earliest studies of bird collision mortality found 85 bird fatalities per year prior to marking windows (254 annual deaths adjusted for the proportion not found). Given that the window markers have long since disappeared, this walkway has likely killed at least 12,705 birds since 1968, and continues to kill birds. Notice that the transparent glass on both sides of the walkway gives the impression of unimpeded airspace that can be navigated safely by birds familiar with flying between tree branches. Also note the reflected images of trees, which can mislead birds into seeing safe perch sites. Further note the distances of ornamental trees, which allow birds taking off from those trees to reach full speed upon arrival at the windows.*

Window collisions are often characterized as either the second or third largest source or human-caused bird mortality. The numbers behind these characterizations are often attributed to Klem's (1990) and Dunn's (1993) estimates of about 100 million to 1 billion bird fatalities in the USA, or more recently Loss et al.'s (2014) estimate of 365-988 million bird fatalities in the USA or Calvert et al.'s (2013) and Machtans et al.'s (2013) estimates of 22.4 million and 25 million bird fatalities in Canada, respectively. However, these estimates and their interpretation warrant examination because they were based on opportunistic sampling, volunteer study participation, and fatality monitoring by more inexperienced than experienced searchers.

Klem's (1990) estimate was based on speculation that 1 to 10 birds are killed per building per year, and this speculated range was extended to the number of buildings estimated by the US Census Bureau in 1986. Klem's speculation was supported by fatality monitoring at only two houses, one in Illinois and the other in New York. Also, the basis of his fatality rate extension has changed greatly since 1986. Whereas his estimate served the need to alert the public of the possible magnitude of the bird-window collision issue, it was highly uncertain at the time and undoubtedly outdated more than three decades hence. Indeed, by 2010 Klem (2010) characterized the upper end of his estimated range – 1 billion bird fatalities – as conservative. Furthermore, the estimate lumped species together as if all birds are the same and the loss of all birds to windows has the same level of impact.

Homes with birdfeeders are associated with higher rates of window collisions than are homes without birdfeeders (Kummer and Bayne 2015, Kummer et al. 2016a), so the developed area might pose even greater hazard to birds if it includes numerous birdfeeders. Another factor potentially biasing national or North American estimates low was revealed by Bracey et al.'s (2016) finding that trained fatality searchers found 2.6× the number of fatalities found by homeowners on the days when both trained searchers and homeowners searched around homes. The difference in carcass detection was

30.4-fold when involving carcasses volitionally placed by Bracey et al. (2016) in blind detection trials. This much larger difference in trial carcass detection rates likely resulted because their placements did not include the sounds that typically alert homeowners to actual window collisions, but this explanation also raises the question of how often homeowner participants with such studies miss detecting window-caused fatalities because they did not hear the collisions.

By the time Loss et al. (2014) performed their effort to estimate annual USA bird-window fatalities, many more fatality monitoring studies had been reported or were underway. Loss et al. (2014) were able to incorporate many more fatality rates based on scientific monitoring, and they were more careful about which fatality rates to include. However, they included estimates based on fatality monitoring by homeowners, which in one study were found to detect only 38% of the available window fatalities (Bracey et al. 2016). Loss et al. (2014) excluded all fatality records lacking a dead bird in hand, such as injured birds or feather or blood spots on windows. Loss et al.'s (2014) fatality metric was the number of fatalities per building (where in this context a building can include a house, low-rise, or high-rise structure), but they assumed that this metric was based on window collisions. Because most of the bird-window collision studies were limited to migration seasons, Loss et al. (2014) developed an admittedly assumption-laden correction factor for making annual estimates. Also, only 2 of the studies included adjustments for carcass persistence and searcher detection error, and it was unclear how and to what degree fatality rates were adjusted for these factors. Although Loss et al. (2014) attempted to account for some biases as well as for large sources of uncertainty mostly resulting from an opportunistic rather than systematic sampling data source, their estimated annual fatality rate across the USA was highly uncertain and vulnerable to multiple biases, most of which would have resulted in fatality estimates biased low.

In my review of bird-window collision monitoring, I found that the search radius around homes and buildings was very narrow, usually 2 meters. Based on my experience with bird collisions in other contexts, I would expect that a large portion of bird-window collision victims would end up farther than 2 m from the windows, especially when the windows are higher up on tall buildings. In my experience, searcher detection rates tend to be low for small birds deposited on ground with vegetation cover or woodchips or other types of organic matter. Also, vertebrate scavengers entrain on anthropogenic sources of mortality and quickly remove many of the carcasses, thereby preventing the fatality searcher from detecting these fatalities. Adjusting fatality rates for these factors – search radius bias, searcher detection error, and carcass persistence rates – would greatly increase nationwide estimates of bird-window collision fatalities.

Buildings can intercept many nocturnal migrants as well as birds flying in daylight. As mentioned above, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a four-story glass walkway at Washington State University (no adjustments attempted). Somerlot (2003) found 21 bird fatalities among 13 buildings on a university campus within only 61 days. Monitoring twice per week, Hager at al. (2008) found 215 bird fatalities of 48 species, or 55 birds/building/year, and at another site they found 142 bird fatalities of 37 species for 24 birds/building/year.

Gelb and Delacretaz (2009) recorded 5,400 bird fatalities under buildings in New York City, based on a decade of monitoring only during migration periods, and some of the high-rises were associated with hundreds of fatalities each. Klem et al. (2009) monitored 73 building façades in New York City during 114 days of two migratory periods, tallying 549 collision victims, nearly 5 birds per day. Borden et al. (2010) surveyed a 1.8 km route 3 times per week during 12-month period and found 271 bird fatalities of 50 species. Parkins et al. (2015) found 35 bird fatalities of 16 species within only 45 days of monitoring under 4 building façades. From 24 days of survey over a 48 day span, Porter and Huang (2015) found 47 fatalities under 8 buildings on a university campus. Sabo et al. (2016) found 27 bird fatalities over 61 days of searches under 31 windows. In San Francisco, Kahle et al. (2016) found 355 collision victims within 1,762 days under a 5-story building. Ocampo-Peñuela et al. (2016) searched the perimeters of 6 buildings on a university campus, finding 86 fatalities after 63 days of surveys. One of these buildings produced 61 of the 86 fatalities, and another building with collision-deterrent glass caused only 2 of the fatalities, thereby indicating a wide range in impacts likely influenced by various factors. There is ample evidence available to support my prediction that the proposed project would result in many collision fatalities of birds.

Response to Comment No. 2-19

The commenter claims that the proposed Project would result in collision fatalities of birds and that the EIR was not prepared with the benefit of survey visits by wildlife biologists. To support this claim, the commenter provides several sources regarding bird collisions and fatalities; however, not of these sources contain specific information regarding the Project or its vicinity.

CEQA requires an analysis of impacts on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. As discussed in the Initial Study, Subsection IV., Biological Resources, the Project Site is entirely developed and has been operating as an urban use for decades. Grand Park, located approximately 400 feet to the northeast, is the nearest park that would contain habitat that could attract local birds to the area. However, as discussed above under Response to Comment 2-18, the only special-status species observed in this park was a Peregrine falcon in 2010. Furthermore, the nearest waterway, the Los Angeles River, is a concrete channel and is located approximately 0.89 mile to the east of the Project Site and Elysian Park is located approximately 1-mile north of the Project Site. Thus, the likelihood of encountering special-status avian species in the vicinity of the Project Site is considered low. While there are existing street trees surrounding the Project Site, these would be maintained, and additional trees would be planted as a part of the Project. As discussed in the Initial Study, Subsection IV., Biological Resources, given the proximity of existing trees, the potential exists for protected bird species to be nesting in the street trees during Project construction. The reduce potential impacts and avoid disturbance of nesting birds, should any construction activities occur during nesting season (February 15 to August 31), Mitigation Measure MM-BIO-1 would be implemented and would require that all suitable habitat (i.e., street trees and shrubs) be surveyed for the presence of nesting birds by a qualified biologist. Thus, Implementation

of this mitigation measure would reduce potential impacts to nesting birds to a less-than-significant level.

Regarding the summarized fatality numbers provided by the commenter, while these numbers were taken from multiple sources across the United States, only one of those sources was focused in California and it was focused on a building within a large urbanized park and not a downtown area. Furthermore, the majority of the sources provided had monitoring that was conducted in rural or suburban landscapes and, thus, are not representative of an urban environment such as downtown Los Angeles, where there is less likelihood for special-status avian species to be present. Furthermore, the U.S. Fish and Wildlife Service (USFWS) provides the following regarding the effects of tall buildings versus other buildings:

> Annual bird mortality resulting from window collisions in the U.S. is estimated to be between 365-988 million birds (Loss et al. 2014). While most people consider bird/glass collisions an urban phenomenon involving tall, mirrored-glass skyscrapers, the reality is that 56% of collision mortality occurs at low-rise (i.e., one to three story) buildings, 44% at urban and rural residences, and <1% at high-rises (Loss et al. 2014).[13]

Therefore, the analysis provided by the commenter does not support the commenter's claim that there is ample evidence that the Project would result in many collision fatalities of birds or special-status avian specie and the analysis and mitigation provided in the Initial Study and Draft EIR is sufficient. Thus, no additional analysis is needed.

Comment No. 2-20

PROJECT IMPACT PREDICTION

Predicting the number of bird collisions at a new project is challenging because the study of window collisions remains in its early stages. Researchers have yet to agree on a collision rate metric. Some have reported findings as collisions per building per year and some as collisions per building per day. Some have reported findings as collisions per m2 of window. The problem with the temporal factor in the collision rate metrics has been monitoring time spans varying from a few days to 10 years, and even in the case of the 10-year span, monitoring was largely restricted to spring and fall migration seasons. Short-term monitoring during one or two seasons of the year cannot represent a 'year,' but monitoring has rarely spanned a full year. Using 'buildings' in the metric treats buildings as all the same size, when we know they are not. Using square meters of glass in the metric treats glass as the only barrier upon which birds collide against a building's façade, when we know it is not. It also treats all glass as equal, even though we know that collision risk varies by type of glass as well as multiple factors related to contextual settings.

Without the benefit of more advanced understanding of window collision factors, my prediction of project impacts will be uncertain. Klem's (1990) often-cited national

[13] U.S. Fish and Wildlife Service, Division of Migratory Bird Management. January 2016. Reducing Bird Collisions with Buildings and Building Glass: Best Practices.

estimate of avian collision rate relied on an assumed average collision rate of 1 to 10 birds per building per year, but studies since then have all reported higher rates of collisions 12 to 352 birds per building per year. Because the more recent studies were likely performed at buildings known or suspected to cause many collisions, collision rates from them could be biased high. By the time of these comments I had reviewed and processed results of bird collision monitoring at 181 buildings and façades for which bird collisions per m2 of glass per year could be calculated and averaged (Johnson and Hudson 1976, O'Connell 2001, Somerlot 2003, Hager et al. 2008, Borden et al. 2010,

Hager et al. 2013, Porter and Huang 2015, Parkins et al. 2015, Kahle et al. 2016, Ocampo-Peñuela et al. 2016, Sabo et al. 2016, Barton et al. 2017, Schneider et al. 2018). These study results averaged 0.077 bird deaths per m2 of glass per year (95% CI: 0.04- 0.11). Looking over the proposed building design, I estimated the buildings would include at least 30,000 m2 of glass windows, which applied to the mean fatality rate would predict 2,310 bird deaths per year (95% CI: 1,200-3,300) at the buildings. The 50-year toll from this average annual fatality rate would be 115,500 bird deaths (95% CI: 60,000-165,000), which would continue until the buildings are either renovated to reduce bird collisions or they come down. The vast majority of these deaths would be of birds newly protected under Fish and Game Code section 3513, which was amended by Governor Newsom's signing of AB 454 on 27 September 2019 to reinstate as state law the recently repealed federal Migratory Bird Treaty Act. If the project moves forward as proposed, and annually kills thousands of birds protected by AB 454, the project will cause significant unmitigated impacts.

As mentioned earlier, the accuracy of my window collision predictions depends on factors known or hypothesized to affect window collision rates. However, from the national average collision rate, I used all the variation in collision rates that was available and which resulted from a wide range in building height, type of glass, indoor and outdoor landscaping, interior light management, window to wall ratio, and structural context of the façade. This variation contributed to a robust bird-window collision rate represented by a wide 95% confidence interval. According to the confidence interval, which again was based on the wide range of conditions in the underlying data, the proposed project built as designed at 100 locations would be predicted to kill between 1,200 and 3,300 birds per year at 95 of those 100 locations, leaving the other 5 to kill birds at rates either lower or higher than this range. Even at the low end of the interval, the death toll would be excessive, amounting to 60,000 bird deaths over 50 years. This impact would be significant, especially considering that the predicted fatality rate can be prevented by implementing appropriate mitigation measures. Below I will discuss hypothesized bird-window collision factors, and I will recommend mitigation measures.

Response to Comment No. 2-20

The commenter suggests that the Project will result in large numbers of avian annual window collision fatalities based on personal anecdotal evidence and scientific articles without specifying how it relates to the Project location. As discussed in the Initial Study, Subsection IV., *Biological Resources*, the Project Site is entirely developed and has been operating as an urban use for decades. As discussed in Response to Comment 2-19, to the summarized fatality numbers provided by the commenter were taken from

multiple sources across the United States, only one of those sources was focused in California and none were focused on the Project and its vicinity. The majority of the sources provided had monitoring that was conducted in rural or suburban landscapes and, thus, are not representative of an urban environment such as downtown Los Angeles. Therefore, there is no evidence that an urbanized location with already existing skyscrapers could increase collision fatalities of birds or evidence of an avian migration corridor existing within the Project Site. To the contrary, as set forth in Response to Comment 2-19, the USFW has determined that less than one percent of avian collisions involve high rises. Given the lack of substantial evidence of a potential impact, no further analysis is required.

Summarizing data from multiple articles without taking into account the lack of avian observations (especially migrating passerine species which have been documented to have the highest window collision mortality), and the preexisting urbanized landscape does not conclusively yield an accurate average collision rate. Furthermore, the commenter states that the study of window collisions remains in its early states and that the commenter's own predictions of project impacts are uncertain without the benefit of more advanced understanding of window collisions factors, which indicates the speculative and uncertain nature of the comment with respect to this specific Project Site and its surrounding context. Therefore, the estimates provided by the commenter are inaccurate and do not appropriately represent the Project.

Comment No. 2-21

BIRD-WINDOW COLLISION FACTORS

Below is a list of collision factors I found in the scientific literature. Following this list are specific notes and findings taken from the literature and my own experience.

(1) Inherent hazard of a structure in the airspace used for nocturnal migration or other flights

(2) Window transparency, falsely revealing passage through structure or to indoor plants

(3) Window reflectance, falsely depicting vegetation, competitors, or open airspace

(4) Black hole or passage effect

(5) Window or façade extent, or proportion of façade consisting of window or other reflective surface

(6) Size of window

(7) Type of glass

(8) Lighting, which is correlated with window extent and building operations

(9) Height of structure (collision mechanisms shift with height above ground)

(10) Orientation of façade with respect to winds and solar exposure

(11) Structural layout causing confusion and entrapment

(12) Context in terms of urban-rural gradient, or surrounding extent of impervious surface vs vegetation

(13) Height, structure, and extent of vegetation grown near home or building

(14) Presence of birdfeeders or other attractants

(15) Relative abundance

(16) Season of the year

(17) Ecology, demography and behavior

(18) Predatory attacks or cues provoking fear of attack

(19) Aggressive social interactions

(1) Inherent hazard of structure in airspace.—Not all of a structure's collision risk can be attributed to windows. Overing (1938) reported 576 birds collided with the Washington Monument in 90 minutes on one night, 12 September 1937. The average annual fatality count had been 328 birds from 1932 through 1936. Gelb and Delacretaz (2009) and Klem et al. (2009) also reported finding collision victims at buildings lacking windows, although many fewer than they found at buildings fitted with widows. The takeaway is that any building going up at the project site would likely kill birds, although the impacts of a glass-sided building would likely be much greater.

(2) Window transparency.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the transparency of glass used in windows on the buildings (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred where transparent windows revealed interior vegetation.

(3) Window reflectance.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the reflectance of glass used in windows on the buildings (Klem 1989). Reflectance can deceptively depict open airspace, vegetation as habitat destination, or competitive rivals as self-images (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred toward the lower parts of buildings where large glass exteriors reflected outdoor vegetation. Klem et al. (2009) and Borden et al. (2010) also found that reflected outdoor vegetation associated positively with collisions.

(4) Black hole or passage effect.—Although this factor was not often mentioned in the bird-window collision literature, it was suggested in Sheppard and Phillips (2015). The black hole or passage effect is the deceptive appearance of a cavity or darkened ledge that certain species of bird typically approach with speed when seeking roosting sites.

The deception is achieved when shadows from awnings or the interior light conditions give the appearance of cavities or protected ledges. This factor appears potentially to be nuanced variations on transparency or reflectance or possibly an interaction effect of both of these factors.

(5) Window or façade extent.—Klem et al. (2009), Borden et al. (2010), Hager et al. (2013), and Ocampo-Peñuela et al. (2016) reported increased collision fatalities at buildings with larger reflective façades or higher proportions of façades composed of windows. However, Porter and Huang (2015) found a negative relationship between fatalities found and proportion of façade that was glazed.

(6) Size of window.—According to Kahle et al. (2016), collision rates were higher on large-pane windows compared to small-pane windows.

(7) Type of glass.—Klem et al. (2009) found that collision fatalities associated with the type of glass used on buildings. Otherwise, little attention has been directed towards the types of glass in buildings.

(8) Lighting.—Parkins et al. (2015) found that light emission from buildings correlated positively with percent glass on the façade, suggesting that lighting is linked to the extent of windows. Zink and Eckles (2010) reported fatality reductions, including an 80% reduction at a Chicago high-rise, upon the initiation of the Lights-out Program. However, Zink and Eckles (2010) provided no information on their search effort, such as the number of searches or search interval or search area around each building.

(9) Height of structure.—I found little if any hypothesis-testing related to building height, including whether another suite of factors might relate to collision victims of high-rises. Are migrants more commonly the victims of high-rises or of smaller buildings?

(10) Orientation of façade.—Some studies tested façade orientation, but not convincingly. Confounding factors such as the extent and types of windows would require large sample sizes of collision victims to parse out the variation so that some portion of it could be attributed to orientation of façade. Whether certain orientations cause disproportionately stronger or more realistic-appearing reflections ought to be testable through measurement, but counting dead birds under façades of different orientations would help.

(11) Structural layout.—Bird-safe building guidelines have illustrated examples of structural layouts associated with high rates of bird-window collisions, but little attention has been directed towards hazardous structural layouts in the scientific literature. An exception was Johnson and Hudson (1976), who found high collision rates at 3 stories of glassed-in walkways atop an open breezeway, located on a break in slope with trees on one side of the structure and open sky on the other, Washington State University.

(12) Context in urban-rural gradient.—Numbers of fatalities found in monitoring have associated negatively with increasing developed area surrounding the building (Hager et al. 2013), and positively with more rural settings (Kummer et al. 2016a).

(13) Height, structure and extent of vegetation near building.—Correlations have sometimes been found between collision rates and the presence or extent of vegetation near windows (Hager et al. 2008, Borden et al. 2010, Kummer et al. 2016a, Ocampo-Peñuela et al. 2016). However, Porter and Huang (2015) found a negative relationship between fatalities found and vegetation cover near the building. In my experience, what probably matters most is the distance from the building that vegetation occurs. If the vegetation that is used by birds is very close to a glass façade, then birds coming from that glass will be less likely to attain sufficient speed upon arrival at the façade to result in a fatal injury. Too far away and there is probably no relationship. But 30 to 50 m away, birds alighting from vegetation can attain lethal speeds by the time they arrive at the windows.

(14) Presence of birdfeeders.—Dunn (1993) reported a weak correlation ($r = 0.13$, $P < 0.001$) between number of birds killed by home windows and the number of birds counted at feeders. However, Kummer and Bayne (2015) found that experimental installment of birdfeeders at homes increased bird collisions with windows 1.84-fold.

(15) Relative abundance.—Collision rates have often been assumed to increase with local density or relative abundance (Klem 1989), and positive correlations have been measured (Dunn 1993, Hager et al. 2008). However, Hager and Craig (2014) found a negative correlation between fatality rates and relative abundance near buildings.

(16) Season of the year.—Borden et al. (2010) found 90% of collision fatalities during spring and fall migration periods. The significance of this finding is magnified by 7-day carcass persistence rates of 0.45 and 0.35 in spring and fall, rates which were considerably lower than during winter and summer (Hager et al. 2012). In other words, the concentration of fatalities during migration seasons would increase after applying seasonally-explicit adjustments for carcass persistence. Fatalities caused by collisions into the glass façades of the project's building would likely be concentrated in fall and spring migration periods.

(17) Ecology, demography and behavior.—Klem (1989) noted that certain types of birds were not found as common window-caused fatalities, including soaring hawks and waterbirds. Cusa et al. (2015) found that species colliding with buildings surrounded by higher levels of urban greenery were foliage gleaners, and species colliding with buildings surrounded by higher levels of urbanization were ground foragers. Sabo et al. (2016) found no difference in age class, but did find that migrants are more susceptible to collision than resident birds.

(18) Predatory attacks.—Panic flights caused by raptors were mentioned in 16% of window strike reports in Dunn's (1993) study. I have witnessed Cooper's hawks chasing birds into windows, including house finches next door to my home and a northern mocking bird chased directly into my office window. Predatory birds likely to collide with the project's windows would include Peregrine falcon, red-shouldered hawk, Cooper's hawk, and sharp-shinned hawk.

(19) Aggressive social interactions.—I found no hypothesis-testing of the roles of aggressive social interactions in the literature other than the occasional anecdotal

account of birds attacking their self-images reflected from windows. However, I have witnessed birds chasing each other and sometimes these chases resulting in one of the birds hitting a window.

Response to Comment No. 2-21

This comment provides a description of collision factors taken from literature and the commenter's experience. However, the comment does not explain why or how these factors are relevant to the Project This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted. Further responses are provided below.

Comment No. 2-22

WINDOW COLLISION SOLUTIONS

Given the magnitude of bird-window collision impacts, there are obviously great opportunities for reducing and minimizing these impacts going forward. Existing structures can be modified or retrofitted to reduce impacts, and proposed new structures can be more carefully sited, designed, and managed to minimize impacts. However, the costs of some of these measures can be high and can vary greatly, but most importantly the efficacies of many of these measures remain uncertain. Both the costs and effectiveness of all of these measures can be better understood through experimentation and careful scientific investigation. **Post-construction fatality monitoring should be an essential feature of any new building project.** Below is a listing of mitigation options, along with some notes and findings from the literature.

Any new project should be informed by preconstruction surveys of daytime and nocturnal flight activity. Such surveys can reveal the one or more façades facing the prevailing approach direction of birds, and these revelations can help prioritize where certain types of mitigation can be targeted. It is critical to formulate effective measures prior to construction, because post-construction options will be limited, likely more expensive, and probably less effective.

(1) Retrofitting to reduce impacts
(1A) Marking windows
(1B) Managing outdoor landscape vegetation
(1C) Managing indoor landscape vegetation
(1D) Managing nocturnal lighting

(1A) Marking windows.—Whereas Klem (1990) found no deterrent effect from decals on windows, Johnson and Hudson (1976) reported a fatality reduction of about 69% after placing decals on windows. In an experiment of opportunity, Ocampo-Peñuela et al. (2016) found only 2 of 86 fatalities at one of 6 buildings – the only building with windows treated with a bird deterrent film. At the building with fritted glass, bird collisions were 82% lower than at other buildings with untreated windows. Kahle et al. (2016) added external window shades to some windowed façades to reduce fatalities 82% and 95%. Many external and internal glass markers have been tested experimentally, some

showing no effect and some showing strong deterrent effects (Klem 1989, 1990, 2009, 2011; Klem and Saenger 2013; Rössler et al. 2015).

Following up on the results of Johnson and Hudson (1976), I decided to mark windows of my home, where I have documented 5 bird collision fatalities between the time I moved in and 6 years later. I marked my windows with decals delivered to me via US Postal Service from a commercial vendor. I have documented no fatalities at my windows during the 8 years hence. On 8 December 2018, I photographed a ruby-crowned kinglet pulling up short of my window (Figure 2), right at one of my installed markers. In my assessment, markers can be effective in some situations.

Figure 2. *Ruby-crowned kinglet puts on the brakes in front of a decal I applied to mark windows of my home, 8 December 2018. This window killed birds prior to marking, but I have found no window collision victims since marking the windows. Windows with attractive built-in marking are commercially available.*

(2) Siting and Designing to minimize impacts

(2A) Deciding on location of structure
(2B) Deciding on façade and orientation
(2C) Selecting type and sizes of windows
(2D) Designing to minimize transparency through two parallel façades
(2E) Designing to minimize views of interior plants
(2F) Landscaping to increase distances between windows and trees and shrubs

(3) Monitoring for adaptive management to reduce impacts

(3A) Systematic monitoring for fatalities to identify seasonal and spatial patterns
(3B) Adjust light management, window marking and other measures as needed.

Response to Comment No. 2-22

The commenter provides a list of solutions to prevent window collisions. However, as stated above under Response to Comments 2-18 and 2-19, the commenter provides no credible evidence support to his assertion that the Project could cause collision fatalities of birds. This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted. Further responses are provided below.

Comment No. 2-23

GUIDELINES ON BUILDING DESIGN

If the project goes forward, it should at a minimum adhere to available guidelines on building design intended to minimize collision hazards to birds. The American Bird Conservancy (ABC) produced an excellent set of guidelines recommending actions to: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). The ABC document and both the New York and San Francisco documents provide excellent alerting of potential bird-collision hazards as well as many visual examples. The San Francisco Planning Department's (2011) building design guidelines are more comprehensive than those of New York City, but they could have gone further. For example, the San Francisco guidelines probably should have also covered scientific monitoring of impacts as well as compensatory mitigation for impacts that could not be avoided, minimized or reduced. Monitoring and the use of compensatory mitigation should be incorporated at any new building project because the measures recommended in the available guidelines remain of uncertain effectiveness, and even if these measures are effective, they will not reduce collision fatalities to zero. The only way to assess effectiveness and to quantify post-construction fatalities is to monitor the project for fatalities.

Response to Comment No. 2-23

The commenter provides some recommendations for building design to mitigate bird impacts. As previously stated, because there would be less-than-significant impacts on special-status avian species, mitigation beyond what was provided in the Initial Study is not warranted. However, the comment is noted and will be provided to the decisionmakers.

Comment No. 2-24

CUMULATIVE IMPACTS

City of Los Angeles (2019a,b) provides no analysis of cumulative impacts on birds caused by window collisions in the City, nor any analysis of the proposed project's contribution to cumulative impacts of window collisions. This missing analysis is a critical shortfall, because bird abundance across North American has declined 29% over the last 48 years (Rosenberg et al. 2019). The proposed project alone is predicted to kill 2,310 bird deaths per year (95% CI: 1,200-3,300), which would add to many thousands more killed by windows in Los Angeles. City of Los Angeles needs to provide an estimate of the extent of windows already constructed, as well as an estimate of projected future extent of windows in the City. From such estimates, the City's cumulative toll on birds colliding with windows can be estimated.

Response to Comment No. 2-24

The commenter claims that the City will have a cumulative impact on birds caused by window collisions. The Project would have less-significant-impacts on special-status

avian species with implementation of Mitigation Measure MM-BIO-1. For the reasons set forth in Response to Comments 2-18 and 2-19, the commenter does not provide substantial evidence that there would be bird-related fatalities related to window collisions at the Project Site or at the sites of related projects. Moreover, many of the related projects in the Project vicinity are high rise buildings, which as noted experience only a small percentage of bird collisions. Therefore, cumulative impacts would be less than significant and the Project's contribution would not be considerable. Thus, no further analysis is warranted.

Comment No. 2-25

MITIGATION

Bird surveys need to be performed to adequately characterize flight patterns through the project area. These surveys need to inform a revised EIR, which should require adherence to the available guidelines on minimizing bird-window collisions (see earlier comments). Compensatory mitigation should be formulated for those collision fatalities that cannot be avoided through implementation of guidelines. Unavoidable collision fatalities should be measured through two or more years of post-construction fatality monitoring, and the revised EIR should tie levels of compensatory mitigation to threshold fatality rates.

Response to Comment No. 2-25

The commenter recommends bird surveys as mitigation measures to minimize bird-window collisions. As stated above in Response to Comment 2-18, the Project would have less-significant-impacts on special-status avian species with implementation of Mitigation Measure MM-BIO-1, which requires that all suitable habitat (i.e., street trees and shrubs) be surveyed for the presence of nesting birds by a qualified biologist should construction activities occur in nesting season (February 15 to August 31). Given that surveys are currently proposed as mitigation to reduce potential impacts during the nesting season, no additional mitigation is necessary.

Comment No. 2-26

FUND WILDLIFE REHABILITATION FACILITIES

Compensatory mitigation ought also to include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals that will be delivered to these facilities for care. Most of the wildlife injuries will likely be caused by window collisions. But the project's impacts can also be offset by funding the treatment of injuries to animals caused by other buildings, electric lines, cars, and house cats.

Response to Comment No. 2-26

The commenter recommends compensatory mitigation, such as funding contributions to wildlife rehabilitation facilities, as mitigation. Given that the Project would have less-significant-impacts on special-status avian species with implementation of Mitigation Measure MM-BIO-1 and, as discussed above in Response to Comments 2-18 and 2-

19, the commenter does not provide substantial evidence that there would be bird-related fatalities related to window collisions, no additional mitigation is necessary.

Comment No. 2-27

The remainder of Exhibit A contains References Cited and a resume for the commenter and are provided in Attachment A of this response.

Response to Comment No. 2-27

The comment does not raise an environmental issue. No response is warranted.

Comment No. 2-28

EXHIBIT B

Dear Mr. Drury,

We have reviewed the March 2019 Draft Environmental Impact Report ("DEIR") for the Times Mirror Square Project ("Project") located in the City of Los Angeles ("City"). The Project proposes to demolish an existing 183,758 square foot executive building and 6-story parking garage in order to construct two buildings with 1,127 residential units and 34,572 square feet of restaurant space, for a total of 1,135,803 square feet of new development. The Project also proposes to rehabilitate three existing buildings, totaling 376,105 square feet.

Our review concludes that the DEIR fails to adequately evaluate the Project's Air Quality, Health Risk, and Greenhouse Gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated DEIR should be prepared to adequately assess and mitigate the potential air quality and health risk impacts that the project may have on the surrounding environment.

Response to Comment No. 2-28

This comment is an introduction to the remainder of the comment. Detailed responses to these comments are provided in Responses to Comment Nos. 2-29 through 2-54.

Comment No. 2-29

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2.[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project- specific values, but the California Environmental Quality Act (CEQA) requires that such changes be justified by substantial evidence.[2] Once all of the values are inputted into the model, the Project's

construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's air pollutant emissions and make known which default values were changed as well as provide justification for the values selected.[3]

Review of the Project's air modeling demonstrates that the DEIR underestimates emissions associated with Project activities. As previously stated, the DEIR's air quality analysis relies on air pollutant emissions calculated using CalEEMod. When reviewing the Project's CalEEMod output files, provided in Appendix C to the DEIR, we found that several of the values inputted into the model were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions are underestimated. An updated DEIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

Footnote 1: CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4.

Footnote 2: Ibid, p. 1, 9.

Footnote 3: Supra, fn 1, p. 11, 12 – 13. A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.

Response to Comment No. 2-29

Contrary to the comment, the Project's air modeling provided in the Draft EIR does not underestimate emissions associated with the Project's construction and operational activities. The Project's CalEEMod output files, provided in Appendix C to the Draft EIR, contain input values that are consistent with information disclosed in the Draft EIR and in some cases slightly more conservative in order to ensure that the Project's potential air quality impacts are disclosed. As a result, the Project's construction and operational emissions are not underestimated, and the Draft EIR adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality. Refer to Responses to Comments 2-30 through 2-38 for responses to the specific items raised in the comments regarding the Project's CalEEMod output files.

Comment No. 2-30

Failure to Include All Proposed Land Uses

Review of the Project's CalEEMod output files demonstrates that not all of the land uses proposed by the DEIR were included in the model. As a result, the Project's construction and operational emissions may be underestimated.

According to the DEIR, the proposed Towers would include approximately 34,572 square feet of restaurant uses (see excerpt below) (p. II-30, Table II-2).

TABLE II-2
PROPOSED DEVELOPMENT[A]

North and South Towers Uses	North Tower	South Tower	Total
Residential Uses			
Studio	90 Units	0	90 Units
I Bedroom	166 Units	380 Units	546 Units
1 Bedroom + Den	60 Units	100 Units	160 Units
2 Bedroom	132 Units	192 Units	324 Units
3 Bedroom	0 Units	4 Units	4 Units
Penthouse	2 Units	1 Unit	3 Units
Total Residential Units	**450 Units**	**677 Units**	**1,127 Units**
Total Residential Floor Area			*1,071,692 sf*
Non-Residential Uses			
Loading			2,586 sf
Restaurant			34,572 sf
Total Non-Residential Floor Area			*64,111 sf*
Proposed New Floor Area in North and South Towers			**1,135,803 sf**

Review of the Project's CalEEMod output files for the Towers, however, demonstrates that the restaurant land use was not included (see excerpt below) (Appendix C, pp. 135, 181.

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	37.60	1000sqft	0.86	37,597.00	0
Enclosed Parking with Elevator	1,754.00	Space	0.68	697,600.00	0
Other Non-Asphalt Surfaces	74.64	1000sqft	0.09	74,643.00	0
City Park	0.92	Acre	0.09	28,777.00	0
Health Club	25.62	1000sqft	0.59	25,618.00	0
Apartments High Rise	1,127.00	Dwelling Unit	0.80	1,071,692.00	1894

As you can see in the excerpt above, the Towers air model fails to include the proposed restaurant land use. The land usage parameters, including land use types and sizes, are used throughout CalEEMod to determine default variables and emission factors that go into the model's calculations.[4] For example, land use areas are used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). Therefore, by failing to include the proposed restaurant land use in the Towers air model, the construction and operational emissions are not properly accounted for in the model. Therefore, an updated air quality analysis should be prepared in an updated DEIR to adequately evaluate the Project's construction and operational air quality impacts.

Footnote 4: "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 18.

Response to Comment No. 2-30

The comment is referring to the Project's construction CalEEMod output files provided in Appendix C (C-2, Project Construction Emissions) of the Draft EIR. Construction of the Project's proposed new restaurant use is accounted for in the CalEEMod construction emissions modeling. In the CalEEMod output files, the Project's proposed new restaurant use is included within the land use type listed as "General Office Building" with a floor area of 37,597 square feet. For construction emissions modeling purposes, the CalEEMod would not result in any greater construction emissions if it were to be listed with a land use type of "Restaurant." In other words, changing the land use type to Restaurant would not result in any increase to the quantified construction emissions. In fact, with respect to CalEEMod default values, the change in land use type from General Office Building to Restaurant would only affect the CalEEMod default values for construction worker trips and vendor trips. As indicated on page 14 of the CalEEMod User's Guide, Appendix A: Calculation Details for CalEEMod, the construction worker trip rate for office uses (0.42 daily trips per 1,000 square feet) is slightly greater than for commercial/retail uses (0.34 daily trips per 1,000 square feet) while the construction vendor trip rate for office uses is the same as commercial/retail uses (0.1639 daily trips per 1,000 square feet).[14] The CalEEMod default values for construction worker trips were utilized in the analysis. Therefore, the construction emissions disclosed in the Draft EIR are slightly more conservative for worker trip-related emissions given the slightly higher worker trip rate. In addition, as the modeling assumed 37,597 square feet for the use instead of 34,572 square feet, both the construction worker trips and vendor trips are proportionately overstated.

The Project's construction emissions of VOCs from architectural coating are fully disclosed in the Draft EIR since VOC emissions from architectural coating sources in CalEEMod are calculated based on square footage and do not differentiate whether the land use type is General Office Building or Restaurant.[15] As a result, construction emissions for the Project are conservatively estimated and construction air quality impacts are adequately disclosed in the Draft EIR. This slight overestimation of construction emissions has no effect on the significance determination of the Project, and the Project would still implement the same air quality mitigation measures as provided in the Final EIR.

With respect to operational emissions, as discussed below in Response to Comment No. 2-31 below, restaurant uses are accounted for in the operational emissions modeling within CalEEMod. Thus, no changes to the quality analysis are warranted.

[14] California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, Appendix A: Calculation Details for CalEEMod, p. 14, October 2017.

[15] California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, Appendix A: Calculation Details for CalEEMod, p. 34, October 2017.

Comment No. 2-31

Underestimated Land Use Size

Review of the Project's CalEEMod output files demonstrates that the size of the proposed General Office Building land use was underestimated within the operational model. According to the DEIR, the Project will include 307,288 square feet of office space once operational (p. II-30, table II-2). However, review of the CalEEMod output files reveals that an area value of 285,088 square feet was modeled for the General Office Building land use (see excerpt below) (Appendix C, pp. 258, 269).

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	285.09	1000sqft	0.95	285,088.00	0
User Defined Commercial	3.02	User Defined Unit	0.04	3,025.00	0
Enclosed Parking with Elevator	1,754.00	Space	0.68	697,600.00	0
Other Non-Asphalt Surfaces	74.64	1000sqft	0.08	74,643.00	0
City Park	0.92	Acre	0.08	28,777.00	0
Health Club	25.62	1000sqft	0.08	25,618.00	0
High Turnover (Sit Down Restaurant)	53.39	1000sqft	0.28	53,389.00	0
Quality Restaurant	22.20	1000sqft	0.20	22,200.00	0
Apartments High Rise	1,127.00	Dwelling Unit	0.80	1,071,692.00	1894
Supermarket	50.00	1000sqft	0.50	50,000.00	0

As you can see in the excerpt above, the operational CalEEMod model estimates emissions assuming a General Office Building land use size of 285,088 square feet. This underestimates the operational office space by 22,200 square feet. As previously stated, the land use type and size features are used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations.[5] The square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). Therefore, because the size of the General Office Building land use within the operational air model is underestimated, the operational emissions generated by the proposed Project are underestimated and should not be relied upon to determine Project significance.

Footnote 5: "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 18.

Response to Comment No. 2-31

The comment is referring to the Project's operational CalEEMod output files provided in Appendix C (C-3, Project Operational Emissions) of the Draft EIR. Operation of the Project's proposed office use is accounted for in the CalEEMod operational emissions modeling. In the CalEEMod output files, the Project's 307,088 square feet of offices uses

proposed office use is represented as 285,088 square feet of "General Office Building" and 22,200 square feet of "Quality Restaurant." This provided for a more conservative analysis. As indicated in Table 8.1 of the CalEEMod User's Guide, Appendix D: Default Data Tables, the operational building energy demand values for Quality Restaurant are higher than for General Office Building by approximately 70 percent for electricity and 95 percent for natural gas.[16] Therefore, the Project's operational emissions disclosed in the Draft EIR are slightly more conservative for building energy demand-related emissions given the higher energy demand rates.

The Project's operational emissions of VOCs from architectural coating and the use of consumer products are fully disclosed in the Draft EIR since VOC emissions from these sources in CalEEMod are calculated based on square footage and do not differentiate whether the land use type is General Office Building or Quality Restaurant.[17] As a result, operational emissions for the Project are conservatively estimated, and operational air quality impacts are adequately disclosed in the Draft EIR. This slight overestimation of operational emissions has no effect on the significance determination of the Project and the Project would still implement the same air quality mitigation measures as provided in the Final EIR. Thus, no changes to air quality analysis are warranted. It should be noted that this comment on the CalEEMod output file does not affect the Project's construction air quality analysis.

Comment No. 2-32

Unsubstantiated Reduction in Land Use Population

Review of the Project's CalEEMod output files demonstrates that the population associated with the residential land use was manually reduced without proper justification. As a result, the Project's operational emissions may be underestimated.

According to the "User Entered Comments and Non-Default Data" table, the land use population was changed from 3,223 to 1,894 (see excerpt below) (Appendix B, pp. 138, pp. 184, pp. 260, pp. 271).

tblLandUse	Population	3,223.00	1,894.00

As you can see in the excerpt above, the population size is reduced by 1,329 residents, or approximately 41%. However, the DEIR fails to mention this reduction or justify any change to the land use population for high-rise apartments. According to the CalEEMod User's Guide, the land use population metric is used throughout CalEEMod to calculate

[16] California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, Appendix D: Calculation Details for CalEEMod, Table 8.1, October 2017. The default values for Quality Restaurant (climate zone 12, not historical) are as follows: Title 24 Electricity 8.11 kilowatt-hour (kWh) per square foot (sf); Non-Title 24 Electricity 28.16 kWh/sf; Lighting 7.87 kWh/sf; Title 24 Natural Gas 43 kilo-British thermal units (kBtu) per sf; Non-Title 24 Natural Gas 188 kBtu/sf. The default values for General Office Building (climate zone 12, not historical) are as follows: Title 24 Electricity 4.6 kWh/sf; Non-Title 24 Electricity 4.62 kWh/sf; Lighting 3.77 kWh/sf; Title 24 Natural Gas 10 kBtu/sf; Non-Title 24 Natural Gas 0 kBtu/sf.

[17] California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, Appendix A: Calculation Details for CalEEMod, p. 33 and 34, October 2017.

emissions associated with Project activities.[6] As a result, the operational emissions associated with the Project may be underestimated and should not be relied upon to estimate emissions.

Footnote 6: "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 18.

Response to Comment No. 2-32

The default population values supplied CalEEMod are based on the statewide default or information supplied by individual air districts.[18] Thus, CalEEMod does not contain city-specific or project site specific population data. As stated in the User's Guide, CalEEMod was designed to allow the user to change the defaults to reflect site- or project-specific information, when available, provided that the information is supported by substantial evidence as required by CEQA.[19] The estimated future residential population value for the Project entered into the CalEEMod emissions modeling run, as shown in the CalEEMod output files provided in Appendix C of the Draft EIR, was calculated using an estimated person per household value of 1.68 for the Central City Community Plan area (the Community Plan area in which the Project is located), based on the 2015 Demographics Statistics Report by the City's Department of City Planning Demographics Research Unit. Section IV.J, *Population and Housing*, of the Draft EIR conservatively utilized a population value of 2,739 based on a Citywide person per household factor for multi-family units as published in the 2016 American Community Survey of 2.43, rather than using the lower factor specific to the Central City Community Plan area. However, the difference in the population number does not affect the emissions modeling as the population value is not used to estimate any emission factors or emissions for the Project within CalEEMod version 2016.3.2, the most recent version that was used for the Project. Appendix A of the CalEEMod User's Guide describes the methods, assumptions and data sources that are used for calculating all emission categories.[20] While Appendix A generally states that the residential population is used to estimate some metrics,[21] it identifies no specific use of residential population for calculating emissions. This general stature is likely a holdover from previous models and methodologies that calculated VOC emissions from consumer product usage based on residential population values. However, VOC emissions from consumer product usage is no longer calculated based on residential population, but is currently calculated based on square footage. Therefore, changing the population value in CalEEMod would have no effect on the emissions calculations. As a result, construction and operational emissions for the Project are adequately disclosed in the Draft EIR, and no changes to the air quality analysis are warranted.

[18] California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, Appendix A: Calculation Details for CalEEMod, p. 5, October 2017.

[19] California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, p. 12, November 2017.

[20] California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, Appendix A: Calculation Details for CalEEMod, p. 1, October 2017.

[21] California Air Pollution Control Officers Association, California Emissions Estimator Model User's Guide, Appendix A: Calculation Details for CalEEMod, p. 5, October 2017.

Comment No. 2-33

Incorrectly Applied Tier 4 Mitigation Measure

According to the DEIR, the Project will implement the use of Tier 4 engines for off-road construction equipment in order to reduce construction emissions (p. IV.B-77). The DEIR states,

> "As detailed in mitigation measures MM AQ-1 and MM AQ-2, construction of the Project would be required to utilize off-road diesel powered construction equipment that meet or exceed the stringent CARB and USEPA Tier 4 off-road emissions standards for those equipment rated at 50 hp or greater during Project construction" (p. IV.B-77).

MM-AQ-1 goes on to state,

> "Off-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities associated with grading/excavation/export phase shall meet the Tier 4 standards" (IV. B-78).

As the above excerpt demonstrates, MM-AQ-1 does not specify whether the Project would implement Tier 4 Interim or Tier 4 Final engines. Review of the CalEEMod output files demonstrates that the model assumed that Tier 4 Final engines would be used for 150 pieces of construction equipment.

The excerpts below demonstrate that emissions were modeled assuming that 150 pieces of construction equipment were equipped with Tier 4 Final engines in the Tower, renovation, and vibratory pile driver air models (see excerpts below) (Appendix C, pp. 137, 183, 227, 233, 240, 249).

Response to Comment No. 2-33

Mitigation measure MM-AQ-1 has been clarified to state the Tier 4 Final standards as follows:

> **MM-AQ-1:** The Applicant shall implement construction equipment features for equipment operating at the Project Site. These features shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment prior to the commencement of any construction activities. Construction features will include the following:
>
> a. During plan check, the Project representative shall make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used during any of the construction phases. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each such unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the on-site equipment with the inventory and certified Tier

specification and operating permit. Off-road diesel-powered equipment equal to or greater than 50 horsepower that will be used during any portion of the construction activities shall meet or exceed the Tier 4 Final standards. Construction contractors supplying heavy duty diesel equipment greater than 50 horsepower shall be encouraged to apply for SCAQMD SOON funds. Information including the SCAQMD website shall be provided to each contractor which uses heavy duty diesel for on-site construction activities.

Paragraphs b and c of MM-AQ-1 remain unchanged.

Comment No. 2-34

Tower Construction

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	42.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

Vibratory Pile Driver

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

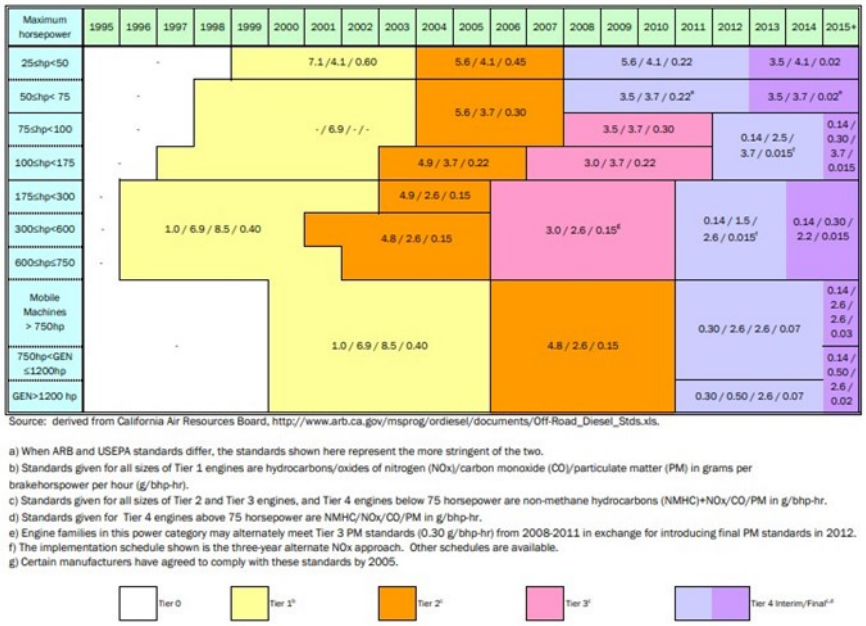
Renovation

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

As can be seen in the excerpt above, the CalEEMod model assumes that 150 pieces of equipment used during Project construction would be mitigated with Tier 4 *Final* equipment. As discussed, this presents a significant issue, as the DEIR does not commit to the use of the more efficient Tier 4 Final equipment.

The United States Environmental Protection Agency (U.S. EPA) has slowly adopted more stringent standards to lower the emissions from off-road construction equipment since 1994. Since that time, Tier 1, Tier 2, Tier 3, Tier 4 Interim, and Tier 4 Final construction equipment has been phased in over time.

Tier 4 Final represents the cleanest burning equipment and therefore has the lowest emissions compared to other tiers, including Tier 4 Interim equipment (see excerpt below):[7]



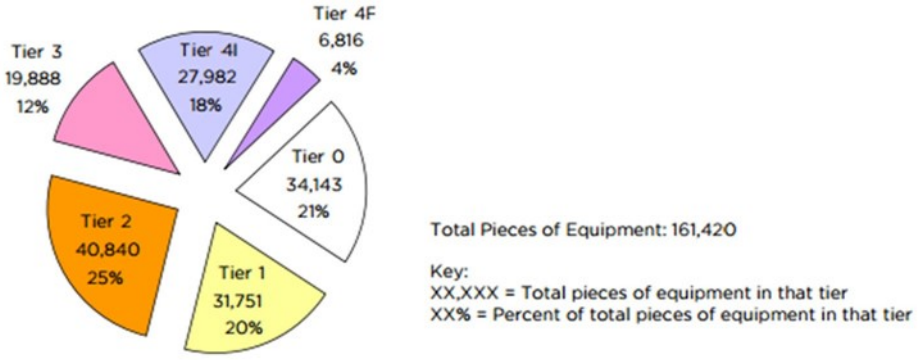
Source: derived from California Air Resources Board, http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road_Diesel_Stds.xls.

a) When ARB and USEPA standards differ, the standards shown here represent the more stringent of the two.
b) Standards given for all sizes of Tier 1 engines are hydrocarbons/oxides of nitrogen (NOx)/carbon monoxide (CO)/particulate matter (PM) in grams per brakehorspower per hour (g/bhp-hr).
c) Standards given for all sizes of Tier 2 and Tier 3 engines, and Tier 4 engines below 75 horsepower are non-methane hydrocarbons (NMHC)+NOx/CO/PM in g/bhp-hr.
d) Standards given for Tier 4 engines above 75 horsepower are NMHC/NOx/CO/PM in g/bhp-hr.
e) Engine families in this power category may alternately meet Tier 3 PM standards (0.30 g/bhp-hr) from 2008-2011 in exchange for introducing final PM standards in 2012.
f) The implementation schedule shown is the three-year alternate NOx approach. Other schedules are available.
g) Certain manufacturers have agreed to comply with these standards by 2005.

As demonstrated in the figure above, Tier 4 Interim and Tier 3 equipment have greater emission levels than Tier 4 Final equipment. Therefore, by modeling construction emissions assuming nearly a full Tier 4 Final equipment fleet, the Project Applicant failed to account for higher emissions that may occur as a result of the use of Tier 3 or Tier 4 Interim equipment. Since MM-AIR-1 fails to specify whether the Project will use Tier 4 Interim or Tier 4 Final equipment, it is incorrect to model emissions assuming that Tier 4 Final equipment will be used. Until the Project Applicant specifies that the Project will actually use Tier 4 Final engines during all phases of construction, and not utilize Tier 4 Interim equipment, the Project's potential impacts should not be evaluated assuming the use of this cleaner burning equipment.

Furthermore, review of the DEIR demonstrates that the DEIR failed to evaluate the feasibility in obtaining Tier 4 equipment. Due to the limited amount of Tier 4, especially Tier 4 Final, equipment available, the DEIR should have assessed the feasibility in obtaining equipment with Tier 4 Final (or interim) engines (see excerpt below).[8]

Figure 4: 2014 Statewide All Fleet Sizes (Pieces of Equipment)



As demonstrated in the figure above, the Tier 4 Final equipment only accounts for 4% of all off-road equipment currently available in California. Thus, emissions are modeled

assuming that the Project will be able to obtain 150 pieces of Tier 4 Final equipment even though this equipment only accounts for 4% of available off-road equipment currently available in California. As a result, the model represents the best-case scenario even though obtaining these types of equipment may not be feasible.

Footnote 7: "San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects." August 2015, available at: https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf, p. 6.

Footnote 8: *Ibid*.

Response to Comment No. 2-34

The use of Tier 4 Final equipment will be a requirement in the bid document and a successful bid must include proof of the fleet. As such, the Draft EIR's impact analysis appropriately considers the use of Tier 4 Final equipment in analyzing the Project's potential impacts and determining their significance. As required in MM-AQ-1, a copy of each such unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the onsite equipment with the inventory and certified Tier specification and operating permit.

As discussed on pages IV.B-5 and -6, in Section IV.B, *Air Quality*, of the Draft EIR, CARB has promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower, which aim to reduce emissions by the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models (13 CCR, Section 2449). Implementation of these standards is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with large fleets beginning compliance in 2014, medium fleets in 2017, and small fleets in 2019. The compliance schedule requires that Best Available Control Technology (BACT) turn overs or retrofits (Verified Diesel Emission Control Strategies [VDECS] installation) be fully implemented by 2023 in all equipment for large fleets (fleets with more than 5,000 horsepower) and medium fleets (fleets with 2,501 to 5,000 horsepower) and by 2028 for small fleets (fleets with less than or equal to 2,500 horsepower). The Project will require the use of many pieces of construction equipment and will require a contractor with a large or medium fleet. Thus, the proportion of cleaner construction equipment that meet the Tier 4 standard would be high, given that the full compliance date of 2023 is near the time the Project would actually start construction.

Additional evidence of the reasonable availability of cleaner construction equipment meeting the Tier 4 standard is provided in the CARB OFFROAD2017 model. OFFROAD2017 is CARB's inventory tool for off-road diesel equipment that provides the population, emissions, fuel, and equipment information for off-road diesel vehicles.[22] Any heavy-duty diesel equipment manufactured 2015 or later, is required to meet the

[22] California Air Resources Board, Mobile Source Emissions Inventory, Off-Road Diesel Vehicles, OFFROAD 2017-ORION, 2017. https://www.arb.ca.gov/orion/. Accessed November 19, 2019.

Tier 4 Final emission standards. OFFROAD2017 was used to estimate the amount of Tier 4 Final equipment that would be available in 2019. Project construction may begin at a later date, in which case the supply of Tier 4 Final equipment would be higher. Based on CARB OFFROAD2017 model, which uses past data on the adoption rate of previous engine Tiers after their introduction to forecast future year adoption rates, the 2019 statewide construction fleet would include 41,862 pieces of diesel equipment meeting Tier 4 Final emission standards, representing approximately 30 percent of the statewide construction fleet.[23] Tier 4 Final equipment fleet populations would grow to 50,886 and 61,039, representing 36 and 42 percent of the 2020 and 2021 construction fleets, respectively.

By 2023, large and medium contractors are required to have all Tier 4 Final equipment to meet State law. The commenter's claim that it would be infeasible for the Project to utilize Tier 4 Final equipment for equipment greater than 50 horsepower is incorrect because it is based on Tier 4 Final fleet quantity data from 2014 and does not represent the currently available data. Furthermore, CARB's OFFROAD2017 inventory shows more than 40,000 pieces of Tier 4 Final equipment are included in California's construction fleet and cleaner engines, including Tier 4 Final, would be integrated into large and medium fleets to meet CARB regulations for off-road diesel vehicles. Therefore, it is feasible for the Project to utilize and incorporate Tier 4 Final equipment for Project construction.

In summary, substantial evidence supports the Draft EIR's analysis of the Project's potential air quality impacts, with incorporation of Tier 4 Final equipment. As discussed in MM-AQ-1, Tier 4 Final requirements must be included in the bid documents, and the successful contractor(s) must demonstrate the ability to supply such equipment; therefore, the Tier 4 equipment requirements are an integral part of the Project's construction process. It is realistic and feasible to assume that construction contractors would have equipment meeting Tier 4 requirements because as stated above, large and medium fleets began compliance in 2014 and 2017, respectively, facing full implementation by 2023. These contractors, which are the type required for construction of the Project, can reasonably be expected to have a sufficient number of Tier 4 equipment by the time the Project actually starts construction based on the substantial evidence discussed above and in the Draft EIR.

Comment No. 2-35

Unsubstantiated Application of Fuel Type Mitigation Measure

Review of the CalEEMod output files for the Towers demonstrates that the fuel types for several pieces of construction equipment were changed from diesel to electrical without proper justification. As a result, construction emissions are underestimated.

[23] California Air Resources Board, OFFROAD2017 and 2017 Off-Road Diesel Emission Factor Update for NOX and PM, 2017. https://ww3.arb.ca.gov/msei/ordiesel/ordas_ef_fcf_2017.pdf. Accessed November 19, 2019.

According to the Project's CalEEMod output files, the fuel type for 16 pieces of construction equipment were manually changed from diesel to electrical (see excerpt below) (Appendix C, pp. 136, 182)

tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00

As you can see in the excerpt above, the model assumes that 12 pieces of construction equipment would use electrical engines rather than the default diesel engines. As previously stated, the CalEEMod User's Guide requires that any non-default values inputted must be justified.[9] While the DEIR states that "[c]onstruction equipment such as tower cranes and signal boards shall utilize electricity from power poles or alternative fuels (i.e., non-diesel), rather than diesel power generators and/or gasoline power generators," it fails to demonstrate how many and which pieces of construction equipment will actually utilize electrical engines (p. IV. B-78). Furthermore, the DEIR fails to actually commit to the implementation and enforcement of this measure. As a result, the application of this mitigation measure cannot be verified, and the air model should not be relied upon to determine Project significance.

Footnote 9: "CalEEMod User's Guide." CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 7, 13.

Response to Comment No. 2-35

Appendix C (C-2, Project Construction Emissions) of the Draft EIR provides a list of the off-road heavy-duty construction equipment that would be electric powered. As shown in Appendix C-2, the two types of equipment include signal boards and cranes (a total of 11 equipment in the CalEEMod output files). This is reflected in the CalEEMod output files with two rows that indicates two equipment types with electrical, rather than the default diesel fuel type (i.e., indicated as two rows in the CalEEMod output file with "electrical" as the fuel type). The CalEEMod output files rows for the number of equipment mitigated (below the fuel type rows) include equipment that would incorporate Tier 4 Final equipment as per MM-AQ-1.

MM-AQ-1 requires that tower cranes and signal boards utilize electricity from power poles or alternative fuels (i.e., non-diesel) rather than diesel power generators and/or gasoline power generators. Electric tower cranes and signal boards are available and are commonly used types of construction equipment. Furthermore, this type of measure is commonly used for development projects in Los Angeles. The requirements of MM-AQ-1 will be included in applicable bid documents, and the successful contractor(s) must demonstrate the ability to supply such equipment. The Project will require the use of many pieces of construction equipment and will require a contractor with a large or medium fleet. Thus, it is expected that the successful contractor(s) would be capable of supplying the required equipment. Therefore, it is feasible for the Project to utilize and incorporate electrical equipment for Project construction as required in MM-AQ-1.

Comment No. 2-36

Incorrect Number of Worker Trips for Construction

The CalEEMod model relies on an incorrect number of worker trips to estimate the Project's construction emissions. As a result, the Project's construction-related air pollutant emissions and associated impacts may be underestimated and are inadequately addressed.

According to the Transportation and Traffic section of the DEIR, there would be 728 two-way, or 1,456 one-way, worker trips for building construction (see excerpt below) (p. IV.P-45, Table IV.P-7).

TABLE IV.P-7
CONSTRUCTION PERIOD TRIP GENERATION

Peak Day Activity Under Each Phase (two-way trips)

	Phase 1: Demolition	Phase 2: Renovation	Phase 3: Site Preparation	Phase 4: Grading	Phase 5: Foundation/ Concrete Pour	Phase 6: Building Construction
Construction Workers	*29*	*62*	*29*	*30*	*19*	*728*
Passenger Car Equivalent (PCE) factor	1.0	1.0	1.0	1.0	1.0	1.0
Haul Truckloads	*10*	*0*	*0*	*140*	*0*	*0*
PCE factor	2.5	2.5	2.5	2.5	2.5	2.5
Delivery/Equipment Truckloads	*0*	*0*	*0*	*0*	*703*	*179*
PCE factor	2.0	2.0	2.0	2.0	2.0	2.0

As you can see in the excerpt above, the Project is anticipated to generate 728 two-way, or 1,456 one- way, trips during Project construction. Review of the CalEEMod output files, however, demonstrates that the Towers model includes an incorrect number of worker trips (see excerpt below) (Appendix C, pp. 150, 196).

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	20	58.00	0.00	3,500.00	14.70	6.90	22.10	LD_Mix	HDT_Mix	HHDT
Site Preparation	18	58.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	24	60.00	0.00	51,088.00	14.70	6.90	22.10	LD_Mix	HDT_Mix	HHDT
Foundation (North Tower)	15	38.00	1,406.00	0.00	14.70	25.00	20.00	LD_Mix	HHDT	HHDT
Foundation (South Tower)	15	38.00	1,173.00	0.00	14.70	25.00	20.00	LD_Mix	HHDT	HHDT
Subterranean Parking Structure	35	1,186.00	302.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Podium Construction	35	1,186.00	357.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	33	1,186.00	271.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	237.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	13	33.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

As you can see in the excerpt above, the total number of worker trips expected to occur during the Building Construction phase is underestimated by 270 trips. Without inputting the 1,456 trips discussed in the DEIR, the Towers air model fails to include all emissions

expected for Project construction. As a result, construction emissions are underestimated. In order to provide the most conservative analysis, as is required by CEQA, the DEIR's Towers air model should have utilized the trip values indicated to model the Project's construction-related air pollutant emissions.

Response to Comment No. 2-36

Contrary to the comment, the Project's CalEEMod output file shows the correct number of worker trips during construction of the Project. In Section IV.P, Transportation and Traffic, of the Draft EIR, Table IV.P-7 references 728 two-way, or 1,456 one-way, construction worker trips during Phase 6: Building Construction, of Project construction. This number of construction worker trips in the traffic analysis refers to the maximum number of trips that would occur during building construction activities, which also includes architectural coating and paving. However, CalEEMod output files segregate Phase 6 into three separate sub-phases: Building Construction; Architectural Coating; and Paving. As shown in the Project's construction CalEEMod output files provided in Appendix C (C-2, Project Construction Emissions) of the Draft EIR, the total amount of trips for these three sub-phase, and Paving or (1,186 + 237 + 33 =1,456 one-way trips) is exactly the same as specified in the traffic analysis for Phase 6. As a result, construction emissions for the Project are adequately disclosed in the Draft EIR, and no changes to the air quality analysis are warranted.

Comment No. 2-37

Unsubstantiated Changes to Indoor and Outdoor Water Use Rates

Review of the Project's CalEEMod output files demonstrates that the Project's indoor water use rates were artificially changed without proper justification. As result, operational emissions may be underestimated.

According to the Project's CalEEMod output files, numerous indoor water use rates were changed from their default values (see excerpt below) (Appendix C, pp. 262, 273).

Table Name	Column Name	Default Value	New Value
tblWater	IndoorWaterUseRate	73,428,586.88	41,370,819.10
tblWater	IndoorWaterUseRate	50,670,114.22	22,622,497.88
tblWater	IndoorWaterUseRate	1,515,247.35	4,209,271.08
tblWater	IndoorWaterUseRate	16,205,664.91	4,236,560.43
tblWater	IndoorWaterUseRate	6,738,448.42	1,761,629.58
tblWater	IndoorWaterUseRate	6,163,410.74	3,967,634.18
tblWater	IndoorWaterUseRate	0.00	511,321.06

As you can see in the excerpt above, the values for indoor water use rates were altered manually. According to the CalEEMod User's Guide, indoor and outdoor water use rates are used to determine land use contributions of GHG emissions associated with supplying and treating water and wastewater.[10] Regarding changes to water use rates, the DEIR states that "[t]he Project would reduce outdoor potable water use by a minimum of 20 percent compared to baseline water consumption" (p. II-48). However, this does not provide any justification for the changes to the Project's indoor water use

rate. As a result, these changes cannot be verified, and the Project's operational emissions may be underestimated.

Footnote 10: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 44

Response to Comment No. 2-37

As noted, the CalEEMod User's Guide allows default inputs to be replaced with project-specific data. In this case, the default water rates in CalEEMod were adjusted with Project-specific information for water usage from the Project's Water Supply Assessment approved by the Los Angeles Department of Water and Power (LADWP), which is further discussed in the Section IV.R, *Water Supply*, of the Draft EIR. The Water Supply Assessment also includes conservation commitments, which are provided as Project Design Feature PDF-WS-1 in the Draft EIR, which will help achieve the Project-specific water reductions. For example, in the operational CalEEMod files provided in Appendix C (C-3, Project Operational Emissions), and as shown in the excerpt in the comment, the residential water usage rate of 41,370,819.10 gallons per year is based on the water demand rate shown in Table IV.R-4 of 116,446 gallons per day. When considering the total additional water conservation of 5,935 gallons per day across all Project uses, a portion of which was allocated as water savings to the residential water usage, and multiplying by 365 days per year, the residential use was calculated as 41,370,819.10. Similar calculations were made for the residential amenity uses and non-residential uses. As a result, the Project's water demand and associated water-related emissions calculations for the Project are justified and accurate. No changes to the air quality analysis are warranted.

Comment No. 2-38

Failure to Implement All Feasible Mitigation to Reduce Emissions

The DEIR determines that the Project's construction NOx emissions would result in a significant air quality impact (see excerpt below) (p. IV.B-61, Table IV.B-7).

TABLE IV.B-11
ESTIMATED MAXIMUM MITIGATED REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY) [a]

Source	VOC	NO_X	CO [d]	SO_2	PM10 [b]	PM2.5 [b]
Individual Phases						
Demolition	2	15	91	<1	5	1
Site Preparation	2	8	75	<1	1	<1
Grading	5	99	89	<1	7	2
Foundation (North Tower)	16	502	125	1.4	33	11
Foundation (South Tower)	13	420	107	1.2	28	9
Subterranean Parking Structure Construction	10	52	148	<1	16	5
Podium Construction	9	54	137	<1	16	5
Building Construction	9	43	117	<1	16	5
Building Construction/Architectural Coating	23	40	122	<1	18	5
Building Construction/Paving/Architectural Coating	23	42	159	<1	19	5
Existing Building Renovations [c]	1	9	21	<1	2	1
Maximum Daily Emissions	**25**	**512**	**180**	**1.5**	**35**	**11**
SCAQMD Numeric Indicators	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	Yes	No	No	No	No

As you can see in the excerpt above, the DEIR determines that construction NOx emissions will exceed the SCAQMD threshold. The DEIR then concludes that the Project's construction NOx emissions will result in a significant air quality impact. As a result, the DEIR proposes a few mitigation measures to reduce the Project's criteria air pollutant emissions. However, even after implementation, the DEIR concludes that the Project's construction NOx emissions would be "significant and unavoidable" (p. IV.B-62). While we agree that the Project would result in a significant construction-related NOx impact, the DEIR's conclusion that these impacts are "significant and unavoidable" is incorrect. According to the California Environmental Quality Act (CEQA),

> "CEQA requires Lead Agencies to mitigate or avoid significant environmental impacts associated with discretionary projects. Environmental documents for projects that have any significant environmental impacts must identify all feasible mitigation measures or alternatives to reduce the impacts below a level of significance. If after the identification of all feasible mitigation measures, a project is still deemed to have significant environmental impacts, the Lead Agency can approve a project, but must adopt a Statement of Overriding Consideration to explain why further mitigation measures are not feasible and why approval of a project with significant unavoidable impacts is warranted."[11]

Thus, an impact can only be labeled as significant and unavoidable after all available, feasible mitigation is considered. Review of the Project's proposed mitigation measures, however, demonstrates that not all feasible mitigation measures are being implemented (p. IV.B- 77 – IV.B- 79). While the DEIR does include two mitigation measures for construction, MM- AQ- 1 and MM- AQ- 2, it fails to incorporate all feasible mitigation, as is required by CEQA. Therefore, the DEIR's conclusion that impacts are significant and unavoidable is unsubstantiated. As a result, additional mitigation measures should be identified and incorporated in order to reduce the Project's air quality impacts to the maximum extent possible. Until all feasible mitigation is reviewed and incorporated into the Project's design, impacts from construction NOx emissions cannot be considered significant and unavoidable.[12]

As a result of the air modeling issues discussed above, we find the Project's air quality impacts to be inadequately evaluated and require that an updated DEIR with an updated CalEEMod model be prepared that properly evaluates and mitigates the Project's air quality impacts to a less than significant level.

Footnote 11: "Guidance for Assessing and Mitigating Air Quality Impacts." SJVAPCD, March 2015, available at: http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, p. 115 of 125.

Footnote 12: See section titled "Mitigation Measures Available to Reduce Construction Emissions" of this comment letter. These measures would effectively reduce construction-related NOx emissions.

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The comment states that Project construction would still exceed the SCAQMD NO_X threshold even with adherence to MM-AQ-1, resulting in 512 pounds per day of mitigated regional NO_X emissions during construction. As discussed on page IV.B-80 of Section IV.B, *Air Quality*, of the Draft EIR, MM-AQ-1 and MM-AQ-2 would minimize regional NO_X emissions to below SCAQMD regional numeric indicators for all phases of Project construction except for the two continuous concrete pouring foundation phases, which would be expected to last up to a total of approximately two days each. Accordingly, the foundation pour for the North Tower would have mitigated regional emissions of 502 pounds per day of NO_X for up to two days. The foundation pour for the South Tower would have mitigated regional emissions of 420 pounds per day of NO_X for up to two days. Although unlikely, if existing building renovation construction activity would occur on the same days as the foundation pours, the maximum mitigated regional emissions for the North Tower foundation pour plus existing building renovations would be approximately 512 pounds per day of NO_X for up to two days and the South Tower foundation pour plus existing building renovations would be approximately 430 pounds per day of NO_X for up to two days. The remaining phases would have regional mitigated NO_X emissions under the 100 pounds per day significance threshold. Thus, the Project would have a maximum of four days above the SCAQMD regional numeric indicator, out of a total of approximately 4 years of construction, which would not considerably hinder attainment of the ozone NAAQS (the primary concern for NO_X emissions in the South Coast Air Basin is that it is an ozone precursor emission).

The NO_X exceedances would occur during the two continuous concrete pouring foundation phases of Project construction, which would last a maximum of four days. The emissions associated with these phases of Project construction are overwhelmingly the result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. The City as lead agency considered other mitigation measure to reduce these emissions further, but ultimately determined they would not be feasible. Specifically, the City considered the use of zero emissions (ZE) and near zero emissions (NZE) trucks as part of the Final EIR. Response to Comment 4-9 of the FEIR contains a detailed explanation of why ZE and NZE concrete trucks would not be commercially available for use during Project construction. The commenter provides no credible evidence to the contrary.

Construction of the Project is expected to occur over approximately four years, with the air quality emissions modeling analysis assuming construction in late 2018 to late 2022, and a full operational year of 2023.[24] However, even when adjusting the construction dates to 2020 to 2024, according to the reports cited below, there would not be enough commercially available ZE and NZE concrete truck fleets and/or infrastructure to accommodate the use of ZE and NZE technology for the Project. According to a Feasibility Assessment for Drayage Trucks for the San Pedro Bay Ports Clean Air Action Plan, ZE and NZE on-road haul trucks availability, as of late-2018, includes one ZE and one NZE fuel-technology platform sold by Original Equipment Manufacturers (OEMs) in commercially available Class 8 trucks suitable for Port use.[25,26] With the development of ZE and NZE platforms, infrastructure has emerged as one of the most significant near-term barriers to wide-scale adoption of these technologies due to standardization difficulties and the ability to develop the full charging infrastructure over the next several years. Additionally, according to the Feasibility Assessment, one OEM plans to begin offering a ZE battery-electric Class 8 truck by 2021, the other OEMs have similar or later timeframes. None will have readily available fleets in time for Project construction use, in particular for the Project's specific need for many concrete trucks over a short duration.[27]

The International Council on Clean Transportation (ICCT) in a November 2017 white paper titled "Transitioning to Zero-Emission Heavy-Duty Freight Vehicles"[28] states that

[24] As noted in on page IV.B-31 of Section IV.B, *Air Quality*, of the Draft EIR, "If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein." Please refer to the Errata.

[25] Port of Long Beach & The Port of Los Angeles, San Pedro Bay Ports Clean Air Action Plan, 2018 Feasibility Assessment for Drayage Trucks, April 2019, http://www.cleanairactionplan.org/documents/final-drayage-truck-feasibility-assessment.pdf/. Accessed June 4, 2019.

[26] Class 8 trucks means any in-use on-road vehicle with a gross vehicle weight rating (GVWR) greater than 33,001 pounds, which includes concrete trucks. See: https://afdc.energy.gov/data/10380.

[27] Letter dated February 28, 2020 attached as Appendix D.

[28] Moultak, M., Lutsey, N., Hall, D., Transitioning to Zero-Emission Heavy-Duty Freight Vehicles, The International Council on Clean Transportation (ICCT), September 26, 2017,

there are "prevailing barriers to widespread viability" of plug-in electric heavy-duty freight vehicles, primarily limited electric range, high vehicle cost, long recharging time, and tradeoffs on cargo weight and/or volume. This report does not cite heavy-duty Class 8 trucks with a gross vehicle weight rating (GVWR) greater than 33,001 pounds, which are similar to the GVWR of the heavy-duty concrete trucks that would be used for the Project, as a promising segment for widespread commercialization. As stated in the white paper, there are "barriers to the growth of electric and hydrogen fuel cell heavy-duty commercial freight trucks include limited technology availability, limited economies of scale, long-distance travel requirements, payload mass and volume constraints, and a lack of refueling and recharging infrastructure."[29] The white paper also states that technologies analyzed are all in research, exploratory, and early demonstration phases. Thus, this report further demonstrates that the ZE and NZE truck fleet would not be viable during construction of the Project.

Furthermore, a recent report by Next 10[30] concludes that California will meet or exceed its 1.5 million by 2025 ZEV goal, primarily through automobiles, but that the state's charging infrastructure is not keeping pace with the growth of its electric vehicle fleet. Through October 2017, more than 337,000 ZEVs had been sold in California, and ZEV sales increased 29.1 percent in California over the previous year. Meanwhile, California has 16,549 public and nonresidential private sector charging outlets - most in the nation by far but only 0.05 public charging outlets per ZEV. Studies show that California will need 125,000 to 220,000 charging ports from private and public sources by 2020 in order to provide adequate infrastructure. The charging stations for EV, especially heavy-duty concrete trucks, are not readily available and would not support the amount of heavy-duty concrete trucks required for the Project.

As demonstrated above, the EV and NEV heavy-duty truck fleet is not readily available at this time, nor would it likely be available within the timeframe for construction of the Project. Since there is not a large percentage of the Class 8 fleet utilizing EV or NEV technology, requiring the Project to utilize EV or NEV trucks as a mitigation measure is not feasible or practicable, in particular for the Project's specific need for many concrete trucks over a short duration for the two-day concrete pour for each tower. Additionally, as stated above, the Project would only exceed the SCAQMD numeric indicators for a short time, up to four days, during the concrete pours for the foundations. Thus, a mitigation measure requiring the use of EV or NEV technology is not feasible.

In addition, the Lead Agency considered a mitigation measure requiring 2010 model year or newer engines. As discussed in the Response to Comment 4-9 of the Final EIR, the Lead Agency does not believe that a mitigation measure requiring 2010 model year or newer engines is necessary because this is already required through the CARB 2008 Truck and Bus Regulation. As discussed on page IV.B-5 in Section IV.B, *Air Quality*, of

http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks_ICCT-white-paper_26092017_vF.pdf. Accessed November 19, 2019.

29 Moultak, M., Lutsey, N., Hall, D., Transitioning to Zero-Emission Heavy-Duty Freight Vehicles, The International Council on Clean Transportation (ICCT), September 26, 2017, http://www.theicct.org/sites/default/files/publications/Zero-emission-freight-trucks_ICCT-white-paper_26092017_vF.pdf. Accessed November 19, 2019.

30 Next 10, The Road Ahead for Zero-Emission Vehicles in California: Market Trends & Policy Analysis, January 2018.

the Draft EIR, "In 2008, CARB approved the Truck and Bus regulation to reduce NO_X, PM10, and PM2.5 emissions from existing diesel vehicles operating in California (13 CCR, Section 2025)." The regulation requires that trucks with a gross vehicle weight rating greater than 26,000 pounds, which includes heavy-duty trucks that would be used during Project construction, meet 2010 engine standards, or better. The regulation is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this requirement would meet or exceed the 2010 engine emission standards for NO_X and diesel particulate matter by 2023. Truck fleet operators are required to report compliance with the regulation in accordance with CARB's reporting procedures for the Truck Regulation Upload, Compliance and Reporting System (TRUCRS).[31]

Nonetheless, the Lead Agency has conservatively added the following subparagraph d. to MM AQ-1 to ensure the maximum use of 2010 model or newer engines during the concrete pouring foundation phases:

> d. All concrete trucks used during the Project's concrete pouring foundation shall have 2010 model or newer engines. Prior to issuance of a building permit, the applicant shall provide evidence (such as copies of contracts with concrete subcontractors with specifications or engine certifications) satisfactory to the Department of City Planning demonstrating compliance with this measure.

However, this added measure would not reduce the NOx emission levels during the concrete pouring phases to below the applicable significance threshold, and impacts would remain significant.[32]

There are no other feasible mitigation measures that would reduce the construction NO_X emissions impact associated with the two continuous concrete pouring foundation phases of Project construction as a result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. Therefore, the Lead Agency has appropriately considered feasible mitigation measures as required by CEQA and determined the impact to be significant and unavoidable.

Comment No. 2-39

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The DEIR determines that the proposed Project would result in a less than significant health risk impact without conducting a quantitative construction or operational health risk assessment (HRA) to nearby sensitive receptors (p. IV.B-37). The DEIR attempts to justify the omission of a construction HRA by stating,

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31 California Air Resources Board, Welcome to the Truck Regulation Upload, Compliance and Reporting System (TRUCRS), https://ssl.arb.ca.gov/ssltrucrstb/trucrs_reporting/login.php. Accessed July 7, 2019.

32 The Project's construction emissions during the concrete pouring foundation phases with the above measure are provided in Appendix A to the Errata, which uses the same modeling inputs and methodology as the air quality analysis in the Draft EIR. Note that, as with the Draft EIR, Appendix A to the Errata assumes concurrent construction of the towers and renovation of the existing buildings in order to provide a more conservative analysis.

> "Given the temporary and short- term construction schedule (approximately 48 months), the Project would not result in a long- term (i.e., lifetime or 70-year) exposure as a result of Project construction" (p. IV.B-69).

Furthermore, the DEIR attempts to justify the omission of an operational HRA by stating,

> "Based on the uses expected on the Project Site, potential long- term operational impacts associated with the release of TACs would be minimal, regulated, and controlled, and would not be expected to exceed the SCAQMD numerical indicator of significance. Therefore, impacts would be less than significant" (p. IV.B-71).

However, these justifications for failing to evaluate the health risk posed to nearby sensitive receptors are incorrect for several reasons.

First, simply stating that the Project has a "short-term construction schedule" does not justify the omission of a construction HRA. According to the SCAQMD, the air pollution control agency for the proposed Project, it is recommended that health risk impacts from short-term projects also be assessed. The Guidance document states,

> Since these short-term calculations are only meant for projects with limits on the operating duration, these short-term cancer risk assessments can be thought of as being the equivalent to a 30-year cancer risk estimate and the appropriate thresholds would still apply (i.e. for a 5-year project, the maximum emissions during the 5-year period would be assessed on the more sensitive population, from the third trimester to age 5, after which the project's emissions would drop to 0 for the remaining 25 years to get the 30-year equivalent cancer risk estimate.[13]

Thus, an HRA is required to determine whether the Project would expose sensitive receptors to substantial air pollutants. The DEIR should have conducted some sort of quantitative analysis and should have compared the results of this analysis to applicable thresholds. The SCAQMD provides a specific numerical threshold of 10 in one million for determining a project's health risk impact.[14] Therefore, the DEIR should have conducted an assessment that compares the Project's construction and operational health risks to this threshold in order to determine the Project's health risk impacts. By failing to prepare an HRA, the DEIR fails to provide a comprehensive analysis of the sensitive receptor impacts that may occur as a result of exposure to substantial air pollutants.

Furthermore, just because "potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled," and because the DEIR asserts that impacts would not "exceed the SCAQMD numerical indicator of significance," does not mean that the Project's operational health-related impacts will inherently be less than significant. Although we were not given an operating schedule, we can reasonably assume that once Project construction is complete, it will operate for a long period of time. During operation, the Project will generate vehicle trips and truck deliveries, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to emissions. As such, the DEIR should have conducted a

construction and operational HRA, as long-term exposure to DPM and other TACs may result in a significant health risk impact and therefore, should be properly assessed.

Third, the omission of a quantified HRA is inconsistent with the most recent guidance published by the Office of Environmental Health Hazard Assessment (OEHHA), the organization responsible for providing recommendations and guidance on how to conduct HRAs in California. In February of 2015, the OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, which was formally adopted in March of 2015.[15] This guidance document describes the types of projects that warrant the preparation of an HRA. As previously stated, grading and construction activities for the proposed Project will produce emissions of DPM through the exhaust stacks of construction equipment over an approximate 48-month construction period (p. IV.B-37). The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors.[16] Once construction is complete, Project operation will generate vehicle and truck trips, which will generate additional exhaust emissions, thus continuing to expose nearby sensitive receptors to DPM emissions. The OEHHA document recommends that exposure from projects lasting more than 6 months should be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident (MEIR).[17] Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, per OEHHA guidelines, health risk impacts from Project construction and operation should have been evaluated in an HRA. These recommendations reflect the most recent HRA policy, and as such, an assessment of health risks to nearby sensitive receptors from construction and operation should be included in an updated DEIR.

Footnote 13: "Risk Assessment Procedures for Rules 1401, 1401.1 and 212." SCAQMD, June 2015, available at: http://www.aqmd.gov/docs/default-source/planning/risk-assessment/riskassprocjune15.pdf?sfvrsn=2, p. XII-1 – XII-2.

Footnote 14: "South Coast AQMD Air Quality Significance Thresholds." SCAQMD, April 2019, available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance- thresholds.pdf?sfvrsn=2

Footnote 15: "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Footnote 16: "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-18.

Footnote 17: "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-6, 8-15.

Response to Comment No. 2-39

The commenter maintains that the EIR should have included both a construction and operational health risk assessment of Project's toxic air contaminant (TACs) emissions. Pages IV.B-69 through IV.B-71 of the Draft EIR analyze and disclose the potential for the Project to cause adverse health impacts from exposure to TACs from the Project's construction and operational emissions consistent with CEQA Guidelines Section 15126.2(a). As discussed therein, with respect to Project construction, the Project would be consistent with applicable South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan strategies intended to reduce emissions from construction equipment and activities, which include the use of cleaner construction equipment. The Project would comply with regulatory mandates including CARB Air Toxic Control Measure that limits idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation for the use of cleaner construction equipment. As a result, the impacts from TACs during construction would be less than significant. Consistent with and supportive of the goals of these regulatory mandates to minimize emissions and exposure to emissions, the Project would include emissions controls agreed upon by the City and the Applicant that will be full enforceable by the City, as per MM-AQ-1. While this mitigation measure is intended to reduce the Project's construction criteria pollutant emissions, it would also have the beneficial effect of reducing TACs, including diesel particulate matter (DPM) emissions, from Project construction equipment.

Implementation of MM-AQ-1 would result in the reduction of DPM exhaust emissions from the Project's construction equipment by over approximately 90 percent as compared to the fleet average emissions for construction equipment and vehicles (refer to emissions reductions in Table IV.B-12 and Table IV.B-13 compared to the emissions shown in Table IV.B-8 and Table IV.B-9 of the Draft EIR). As shown in Table IV.B-13 on page IV.B-83 of the Draft EIR, on-site construction emissions of PM2.5, which are highly correlated to DPM emissions, would be minimized to less than 1 pound per day with incorporation of MM-AQ-1. Furthermore, the Project would comply with the CARB ATCM that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location and the CARB In-Use Off-Road Diesel Vehicle Regulation. Compliance with these standards would substantially minimize emissions of TACs during construction. Therefore, the Draft EIR correctly concludes that construction impacts would be less than significant.

Furthermore, as disclosed in the Draft EIR on page IV.B-37, health effects from TACs for sensitive residential receptors are described in terms of individual cancer risk based on a long-term resident exposure duration (i.e., resident lifetime or 70-year). Given the temporary and short-term construction schedule (approximately 48 months), the Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of Project construction.

The commenter's assertion that OEHHA guidance requires preparation of an HRA for short-term construction activities is not correct. The 2015 Guidance Manual was developed by OEHHA, in conjunction with the California Air Resources Board (CARB), for use in implementing the Air Toxics "Hot Spots" Program. The Air Toxics "Hot Spots"

Program requires stationary sources (e.g., power generation facilities, refineries, and chemical plants) to report the types and quantities of certain substances routinely released into the air. The intent in developing the 2015 Guidance Manual was to provide health risk assessment procedures for use in the Air Toxics Hot Spots Program or for the permitting of new or modified stationary sources. The Project is not a "Hot Spots" Program project, but rather involves the construction and operation of a mixed-use development that includes residential, office and retail.

The guidance states:

> The local air pollution control districts sometimes use the risk assessment guidelines for the Hot Spots program in permitting decisions for short-term projects such as construction or waste site remediation. Frequently, the issue of how to address cancer risks from short-term projects arises. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime. (Page 8-17)

While OEHHA provides limited guidance on how to conduct HRAs for short-term projects, it acknowledges the "considerable uncertainty" in evaluating cancer risk over short-term durations. In addition, the guidance document does not identify short-term projects or non-stationary source projects that warrant the preparation of a HRA, nor does it recommend the preparation of HRAs for short-term construction projects or non-stationary source projects, like the proposed mixed-use development.

Although a quantitative construction health risk assessment (HRA) for the Project is not required for the reasons discussed on page IV.B-37 of Section IV.B, *Air Quality*, of the Draft EIR, in order to provide information that further supports the Draft EIR's less than significant finding with respect to TAC emissions, a quantitative health risk assessment has been prepared, and is included as Appendix A of this response letter. The results of the quantitative HRA demonstrate that the Project would not exceed the SCAQMD significance threshold for health risk impacts from TAC emissions and re-confirms the Draft EIR's less than significant finding with respect to TAC emissions. Refer to Response to Comment 2-40 for details regarding the refined quantitative construction HRA.

The analysis of TAC impacts from operation of the Project, provided on pages IV.B-70 and -71 in Section IV.B, *Air Quality*, of the Draft EIR, states that only minor amounts of TAC emissions would be generated. As clarification, this statement is supported by the fact that while the Project would generate approximately 6,994 net new vehicle trips per day (refer to Table IV.P-8 in Section IV.P, *Transportation and Traffic*, of the Draft EIR), the vast majority of these trips would occur from passenger vehicles that would not be diesel-fueled and would not emit diesel particulate matter. As discussed in the Draft EIR, the operational mobile source emissions were estimated using CalEEMod, which incorporates the CARB's on-road vehicle emissions factor model, which assumes approximately 4.2 percent of the vehicle fleet would be diesel-fueled in the Project's

buildout analysis year 2023.[33] Based on this evidence, the proposed Project would generate approximately 294 net new diesel-fueled vehicle trips per day, respectively, based on a 4.2 percent factor. These estimated trips are not all heavy-duty truck trips but rather trips from all diesel-fueled vehicle types including diesel-fueled passenger vehicles, pick-up trucks, delivery vans, light-duty trucks, and heavy-duty trucks. While the SCAQMD has not adopted a numerical threshold for diesel-fueled vehicle trips in which an operational HRA would be required for a land use development project, this provides a reasonable clarification for the operational TAC impacts analysis provided in the EIR.

The SCAQMD has published and adopted the Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). The Project would not include any of these uses; therefore, an operational HRA is neither required nor warranted.

Although a quantitative operational HRA for the Project is not required for the reasons discussed on page IV.B-37 of Section IV.B, *Air Quality*, of the Draft EIR, in order to provide information that further supports the Draft EIR's less than significant finding with respect to TAC emissions, a quantitative health risk assessment has been prepared, and is included as Appendix A of this response letter. The results of the quantitative HRA demonstrate that the Project would not exceed the SCAQMD significance threshold for health risk impacts from TAC emissions and re-confirms the Draft EIR's less than significant finding with respect to TAC emissions. Refer to Response to Comment 2-40 for details regarding the refined quantitative operational HRA.

Comment No. 2-40

Screening-Level Assessment Indicates Significant Impact

In an effort to demonstrate the potential risk posed by Project construction and operation to nearby sensitive receptors, we prepared a simple screening-level HRA. The results of our assessment, as described below, provide substantial evidence that the Project's construction and operational DPM emissions may result in a potentially significant health risk impact not previously identified by the DEIR.

In order to conduct our screening level risk assessment, we relied upon AERSCREEN, which is a screening level air quality dispersion model.[18] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA[19] and the California Air Pollution Control Officers Associated (CAPCOA)[20] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed.

[33] California Air Resources Board, EMFAC2014, South Coast Air Basin; 2020; Annual; All vehicle types; Aggregate model year; Aggregate speed. Please refer also to the Errata regarding the Project buildout year.

If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary HRA of the Project's construction and operational health-related impact to residential sensitive receptors using the annual PM_{10} exhaust estimates from the SWAPE annual CalEEMod output files. According to the DEIR, the nearest residential sensitive receptor is located 250 feet, or approximately 75 meters, southeast of the Project site (p. IV.B-27). Consistent with recommendations set forth by OEHHA, we assumed that residential exposure begins during the third trimester stage of life. The Project's construction CalEEMod output files indicate that construction activities will generate approximately 228 pounds of diesel particulate matter (DPM) over the 1,559-day construction period. The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{227.8\ lbs}{1{,}559\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.0007673\ g/s}$$

Using this equation, we estimated a construction emission rate of 0.000767 grams per second (g/s). Subtracting the 1,559-day construction duration from the total residential duration of 30 years, we assumed that after Project construction, the MEIR would be exposed to the Project's operational DP< for an additional 25.73 years, approximately. The Project's operational CalEEMod emissions indicate that operational activities will generate approximately 407 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{407\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.00585\ g/s}$$

Using this equation, we estimated an operational emission rate of 0.00585 g/s. Construction and operational activity was simulated as a 3.6-acre rectangular area source in AERSCREEN with dimensions of 143 meters by 102 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.[21] AS previously stated, there are residential sensitive receptors located approximately 75 meters from the Project site. The single-hour concentration estimated by AERSCREEN for Project construction is approximately 1.396 µg/m^3 DPM at approximately 75 meters downwind. Multiplying this single- hour concentration by 10%, we get an annualized average concentration 0.1396

µg/m^3 for Project construction at the nearest sensitive receptor. For Project operation, the single- hour concentration is estimated by AERSCREEN is approximately 10.65 µg/m^3 at approximately 75 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 1.065 µg/m^3 for Project operation at the nearest sensitive receptor.

We calculated the excess cancer risk to the residential receptors both maximally exposed and located closest to the Project site using applicable HRA methodologies prescribed by OEHHA and the SCAQMD. Consistent with the construction schedule proposed by the DEIR, the annualized average concentration for construction was used for the entire third trimester of pregnancy (0.25 years) and the first 0.75 years of the infantile stage of life (0 – 2 years). The annualized average concentration for operation was used for the remainder of the 30-year exposure period, which makes up the remainder of the infantile stage of life (0 – 2 years), child stages of life (2 – 16 years) and adult stages of life (16 – 30 years). Consistent with OEHHA, SCAQMD, BAAQMD, and SJVAPCD guidance, we used Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.[22, 23, 24, 25] According to the most updated guidance, quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant) and should be multiplied by a factor of three during the child stage of life (2 to 16 years). We also included the quantified cancer risk without adjusting for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution in accordance with older OEHHA guidance from 2003. This guidance utilizes a less health protective scenario than what is currently recommended by SCAQMD, the air quality district responsible for the City, and several other air districts in the state. Furthermore, in accordance with guidance set forth by OEHHA, we used the 95th percentile breathing rates for infants.[26] Finally, according to SCAQMD guidance, we used a Fraction of Time At Home (FAH) Value of 1 for the 3rd trimester and infant receptors.[27] We used a cancer potency factor of 1.1 (mg/kg-day)$^{-1}$ and an averaging time of 25,550 days. The results of our calculations are shown below.

The Closest Exposed Individual at an Existing Residential Receptor

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk without ASFs*	ASF	Cancer Risk with ASFs*
Construction	0.25	0.1396	361	1.9E-07	10	1.9E-06
3rd Trimester Duration	***0.25***			***1.9E-07***	***3rd Trimester Exposure***	***1.9E-06***
Construction	2.00	0.1396	1090	4.6E-06	10	4.6E-05
Infant Exposure Duration	***2.00***			***4.6E-06***	***Infant Exposure***	***4.6E-05***
Construction	2.02	0.1396				
Operation	11.98	1.065	572	1.1E-04	3	3.3E-04
Child Exposure Duration	***14.00***			***1.1E-04***	***Child Exposure***	***3.3E-04***
Operation	14.00	1.065	261	4.3E-05	1	4.3E-05
Adult Exposure Duration	***14.00***			***4.3E-05***	***Adult Exposure***	***4.3E-05***
Lifetime Exposure Duration	**30.00**			**1.6E-04**	**Lifetime Exposure**	**4.2E-04**

* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.

The excess cancer risk posed to adults, children, infants, and during the third trimester of pregnancy at the closest receptor, located approximately 75 meters away, over the course of Project construction and operation, utilizing age sensitivity factors, are approximately 43, 330, 46, and 1.9 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor, with age sensitivity factors, is approximately 420 in one million. The excess cancer risk posed to adults, children, infants, and during the third trimester of pregnancy at the closest receptor, located approximately 75 meters away, over the course of Project construction and operation, without utilizing age sensitivity factors, are approximately 43, 110, 4.6, 0.19 in one million. The excess cancer risk over the course of a residential lifetime (30 years) at the closest receptor, without utilizing age sensitivity factors, is approximately 160 in one million.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection.[28] The purpose of the screening-level construction HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up- to-date, applicable guidance are used. Therefore, since our screening-level construction HRA indicates a potentially significant impact, an updated CEQA analysis should include a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, an updated DEIR should include a quantified air pollution model as well as an updated, quantified refined health risk

assessment which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Footnote 18: "AERSCREEN Released as the EPA Recommended Screening Model," USEPA, April 11, 2011, *available at:* http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf

Footnote 19: "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Footnote 20: "Health Risk Assessments for Proposed Land Use Projects," CAPCOA, July 2009, *available at:* http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf

Footnote 21: "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." EPA, 1992, *available at:* http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf; see *also* "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 4-36

Footnote 22: "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

Footnote 23: "Draft Environmental Impact Report (DEIR) for the Proposed The Exchange (SCH No. 2018071058)." SCAQMD, March 2019, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/march/RVC190115-03.pdf?sfvrsn=8, p. 4.

Footnote 24: "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 56; see also "Recommended Methods for Screening and Modeling Local Risks and Hazards." BAAQMD, May 2011, *available at:* http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approac h.ashx, p. 65, 86.

Footnote 25: "Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document." SJVAPCD, May 2015, *available at:* https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf, p. 8, 20, 24.

Footnote 26: "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act," June 5, 2015, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk- assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6, p. 19. "Risk Assessment Guidelines Guidance

Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

Footnote 27: "Risk Assessment Procedures for Rules 1401, 1401.1, and 212." SCAQMD, August 2017, *available at:* http://www.aqmd.gov/docs/default-source/rule-book/Proposed- Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7.

Footnote 28: *Supra*, fn 20, p. 1-5.

Response to Comment No. 2-40

This response provides information that re-confirms the Draft EIR's less than significant finding with respect to TAC emissions for Project construction and operations.

(a) Construction Health Risk Assessment

The quantified screening construction and operational HRA provided in the comment was conducted using the AERSCREEN model and indicates a screening risk of 160 in one million (1.6E-04) without age sensitivity factors applied. As stated in the comment, the AERSCREEN model is known to be conservative. In other words, the AERSCREEN model is known to overestimate impacts for several reasons. The AERSCREEN model assumes the construction DPM emissions are emitted from a single location, whereas in reality, DPM emissions are geographically dispersed. For instance, off-road construction equipment emissions would be generated on the Project Site whereas on-road truck emissions would be generated primarily on roadways near the Project Site. When conducting HRAs, the geographic distribution of pollutants associated with a project is a critical and important consideration because health risk impacts are a direct result of TAC concentrations. The AERSCREEN model by its very design cannot account for this type of geographic distribution of emissions. Furthermore, the AERSCREEN model cannot account for temporal distribution of emissions. For instance, construction emissions would be overwhelmingly generated during the daytime hours (when dispersion of TACs is greater), and the AERSCREEN model by its very design cannot account for this type of temporal distribution of emissions. Additionally, the AERSCREEN model does not have the capability to utilize real-world meteorological data to calculate the effects of wind speed and wind direction on pollutant concentrations. These factors are critical when conducting HRAs in order to more accurately determine modeled pollutant concentrations, and excluding these factors will result in concentrations of pollutants at modeled receptor locations that are artificially elevated to highly unreasonable levels. In summary, the commenter's construction HRA uses a screening Tier 1/Tier 2 model, AERSCREEN, that does not take into account real-world meteorological conditions, geographic and temporal distribution of emissions (i.e., construction emissions that would occur in different areas of a project site, emissions that would vary by construction phase, and emissions that would be generated primarily during daytime hours), and that generates high impact results that overstates impacts.

The comment also provides AERSCREEN model results using age sensitivity factors. Early life exposure adjustments (i.e., age sensitivity factors and age-specific breathing rates) were introduced for the first time in the Office of Environmental Health Hazard

Assessment (OEHHA) Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual).[34] The Guidance Manual was developed by OEHHA, in conjunction with CARB, for use in implementing the Air Toxics "Hot Spots" Program (Health and Safety Code Section 44360 et. seq.). The Air Toxics "Hot Spots" Program requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels. The comment references the OEHHA guidelines that apply to stationary source operations and which have no applicability to mixed-use residential and commercial projects, such as the proposed Project.

In comments presented to its Governing Board (Meeting Date: June 5, 2015, Agenda No. 28) relating to TAC exposures associated with Rules 1401, 1401.1, 1402 and 212 revisions, with regard to the use of the revised OEHHA guidelines for projects subject to CEQA, SCAQMD staff reported that:

> *The Proposed Amended Rules are separate from the CEQA significance thresholds. Per the Response to Comments Staff Report PAR 1401, 1401.1, 1402, and 212 A—(8 June 2015), SCAQMD staff is currently evaluating how to implement the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will evaluate a variety of options on how to evaluate health risks under the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will conduct public workshops to gather input before bringing recommendations to the Governing Board.*

To date, the SCAQMD has not conducted public workshops nor developed policy relating to the applicability of applying the revised OEHHA guidance for projects prepared by other public/lead agencies subject to CEQA or for mixed-use residential and commercial projects, such as the proposed Project.

To emphasize the viability of the HRA prepared for the Project, regulatory agencies throughout the state including the California Department of Toxic Substances Control (DTSC), which is charged with protecting individuals and the environment from the effects of toxic substances and responsible for assessing, investigating and evaluating sensitive receptor populations to ensure that properties are free of contamination or that health protective remediation levels are achieved, have adopted U.S. Environmental Protection Agency (US EPA) policy in the application of early-life exposure adjustments.

A review of relevant guidance was conducted by the City to determine applicability of the use of early life exposure adjustments to identified carcinogens. The US EPA provides guidance relating to the use of early life exposure adjustment factors whereby adjustment factors are only considered when carcinogens act "through the mutagenic

[34] Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program, Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, February 2015, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed December 30, 2019.

mode of action."[35] In 2006, the US EPA published a memorandum, which provided guidance regarding the preparation of HRAs should carcinogenic compounds elicit a mutagenic mode of action. As presented in the technical memorandum, numerous compounds were identified as having a mutagenic mode of action. Based upon this review, none of the gaseous compounds considered in the HRA were identified and, therefore, early-life exposure adjustments were not considered. For diesel particulates (pollutants of concern from Project construction equipment and operational diesel-fueled vehicles), polycyclic aromatic hydrocarbons (PAHs) and their derivatives, which are known to exhibit a mutagenic mode of action, comprise less than one percent of the exhaust particulate mass. To date, the US EPA reports that whole diesel engine exhaust has not been shown to elicit a mutagenic mode of action. Therefore, early life exposure adjustments are neither required nor appropriate and, therefore, should not be considered in the Project's TAC analysis.

As stated on pages IV.B-69 through IV.B-71 of Section IV.B, *Air Quality*, the Draft EIR analyzes and discloses the potential for the Project to cause adverse cancer and health impacts from exposure to TACs from the Project's construction and operational emissions consistent with CEQA Guidelines Section 15126.2(a). Although a quantitative HRA for the Project is not required for the reasons discussed on page IV.B-37 of Section IV.B, *Air Quality*, of the Draft EIR and in Response to Comment No. 2-39, in order to provide information that further supports the Draft EIR's less than significant finding with respect to TAC emissions, a refined quantitative construction health risk assessment (HRA) has been prepared, the results of which are discussed below.

The Project construction HRA was performed using a refined modeling approach in accordance with the exposure factors (e.g., fraction of time at home, daily breathing rate factors, exposure durations) in the SCAQMD *Risk Assessment Procedures*[36] in effect at the time of the 2003 OEHHA Guidance Manual, which does not use early life exposure adjustments. As discussed below, the results of the quantitative HRA supports the Draft EIR's less than significant conclusion with respect to TAC emissions.

For the quantitative HRA, refined dispersion modeling was performed using the United States Environmental Protection Agency AMS/EPA Regulatory Model (AERMOD). Meteorological data from the SCAQMD's Downtown Los Angeles monitoring station, which is the closest SCAQMD meteorological station to the Project Site, was used to represent local weather conditions and prevailing winds data. Terrain data from U.S. Geological Survey (USGS) was used to assign elevations to sources and modeling receptors. Sensitive receptors and worker receptors used for modeling were placed at the location of the receptor buildings near to the Project Site. Construction DPM emissions from heavy-duty off-road equipment were modeled using the heavy-duty construction equipment exhaust respirable particulate matter (PM10) emissions estimated from CalEEMod and characterized as volume sources within AERMOD. The volume sources were located throughout the Project Site to represent on-site

[35] United States Environmental Protection Agency, Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens, EPA/630/R-003F, March 2005.

[36] South Coast Air Quality Management District, Risk Assessment Procedures for Rules 1401 and 212 Version 7.0 and Attachment L Version 7.0, 2012.

construction emissions. Off-site DPM emissions from haul trucks traveling within one-quarter mile of the Project Site along street surrounding the Project Site (i.e., Broadway, W. 1st Street, Spring Street, W. 2nd Street, and Los Angeles Street) as well as truck routes towards the U.S. 101 Freeway within approximately 0.25 miles of the Project Site along Broadway, W. 1st Street to S. Main street, and W. 2nd Street to Los Angeles Street. On-road truck emissions were estimated using the CARB on-road vehicle emissions factor (EMFAC) model and were characterized in AERMOD as line-volume sources. Construction emissions were allocated in AERMOD to the active construction hours. The AERMOD model was also run using the urban modeling option, which is SCAQMD policy for all air quality impact analyses in its jurisdiction.

The results of the Project construction HRA using the refined AERMOD dispersion modeling are listed below. As shown, the Project would result in cancer risk impacts that would below the significance threshold of an incremental risk of 10 in one million for the maximum impacted residential and worker receptors. The maximum non-cancer impacts for the Project would be an incremental increase in the hazard index of approximately 0.03, which is less than the threshold of 1.0. The results of this refined AERMOD dispersion modeling provides further substantial evidence that supports the Draft EIR's less than significant conclusion with respect to TAC emissions.

Project Construction Health Risk Assessment Results – Maximum Cancer Risk (Significance Threshold is 10 in one million) (refer to Appendix A, Health Risk Assessment Calculations, of this response letter):

- Residential Receptor: 0.28 in one million
- Worker (Commercial) Receptor: 0.73 in one million

The maximum cancer risk at the residential receptor would occur to the southeast of the Project Site at the Higgins Building Lofts apartment complex located at the corner of S. Main Street and West 2nd Street. The maximum cancer risk at the worker receptor would occur to the west of the Project Site at the adjacent Federal Courthouse on Broadway. The maximum impacts at residential and worker receptors would be below the significance threshold of 10 in one million, and impacts would be less than significant. This information supports the Draft EIR's less than significant finding with respect to TAC emissions and additional analysis is not required.

(b) Operational Health Risk Assessment

An operational HRA is provided as a response to this comment in consideration of the SCAQMD guidance, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, of which the SCAQMD states that it "is suggested that projects with diesel powered mobile sources use the following guidance document to quantify potential cancer risks from the diesel particulate emissions."[37] SCAQMD states that the guidance is a suggested analysis and not a requirement. The following discussion describes deficiencies in the screening

[37] South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, 2003.

analysis provided in the comment, including corrections to errors in the screening analysis based on a refined HRA prepared for the Project to support this response.

The screening construction and operational HRA provided in the comment was conducted using the AERSCREEN model and indicates a screening risk of 160 in one million (1.6E-04) without age sensitivity factors applied. As stated in the comment, the AERSCREEN model is known to be conservative. In other words, the AERSCREEN model is known to overestimate impacts. The risk value reported in the comment using the AERSCREEN model is immediately suspect as erroneous because it is a higher risk value than has been determined for industrial source projects, which generally generate much higher amounts of TACs than mixed-use residential and commercial projects such as the Project. For example, a refined HRA was conducted for the TAMCO Rancho Cucamonga Steel Mini-Mill facility in the City of Huntington Beach, which generates TAC emissions from steel recycling operations (steel furnaces, baghouses, fuel storage and dispensing, and other industrial processes), and determined a 30-year residential risk of 52.7 in one million (5.27E-05).[38] Operation of the proposed Project would only generate a small fraction of the TAC emissions from a minimal number of diesel-fueled vehicles compared to an industrial steel recycling facility with a large number of heavy-duty industrial-sized equipment and vehicles.

The screening operational HRA provided in the comment has several fatal flaws that render the analysis erroneous and unsupported, which are the likely reasons for the erroneously high risk value. The first fatal flaw assumes that all net new trips would generate diesel emissions. This is an erroneous assumption not supported by substantial evidence. As explained above, the proposed Project would generate 294 net new diesel-fueled vehicle trips per day, based on a 4.2 percent factor as determined from CARB's EMFAC model. Another fatal flaw in the comment assumes that the operational activities of the Project would generate annual emissions of approximately 407 pounds of diesel particulate matter per year (1.12 pounds per day). However, this value is overestimated, as it appears to include emissions that are not the result of diesel fuel combustion, such as from typical non-diesel passenger vehicles. Furthermore, the screening operational HRA provided in the comment appears to model all of the emissions from mobile sources as if the emissions were occurring at a single location. This is another fatal flaw because mobile sources, by their very nature, do not generate emissions at a single location but rather along the entire vehicle trip, which would disperse the emissions along regional roadways and not concentrate the emissions as a single location. When conducting HRAs, dispersion of pollutants is critical and important consideration because health risk impacts are a direct result of TAC concentrations. The screening operational HRA provided in the comment incorrectly assumes that all mobile source emissions would occur at a single location, which results in concentrations at a sensitive receptor that are artificially elevated to highly unreasonable levels that are unsupported by substantial evidence. Furthermore, as discussed above in the construction analysis, early life exposure adjustments are neither

[38] South Coast Air Quality Management District, AB2588 Revised Health Risk Assessment (HRA) Approval, Gerdau – Rancho Cucamonga Mill (SCAQMD No.: 18931), October 8, 2015.

required nor appropriate and, therefore, should not be considered in the Project's operational TAC analysis.

A refined quantitative analysis has been prepared for Project operations and corrects the errors present in the screening operational HRA provided in the comment. The number of diesel-fueled vehicle trips has been corrected, as explained above, to 294 net new diesel-fueled vehicle trips per day for the Project. The estimated diesel particulate matter emissions and the location of those emissions have also been corrected. The SCAQMD evaluates TAC emissions within a 1/4-mile distance of a sensitive receptor for evaluating impacts.[39] The reason for this is because TAC emissions occurring beyond a 1/4-mile distance from a sensitive receptor disperse in the atmosphere such that they would not contribute to substantially elevated health risk impacts. Thus, in order to evaluate the incremental increase in operational impacts, it is necessary to determine the diesel particulate matter emissions from the net new diesel-fueled vehicle trips occurring on roadways within a 1/4-mile of sensitive receptors. CalEEMod generates emissions from the full length of vehicle trips in units of pounds per day (or tons per year), but does not separately report emissions within a 1/4-mile of sensitive receptors. Therefore, the EMFAC model was used directly to estimate the portion of the emissions within a 1/4-mile of sensitive receptors. Emission factors for diesel particulate matter were based on EMFAC exhaust PM10 emissions from the diesel-fueled vehicles using an aggregated weighted average for the all diesel-fueled vehicle types for the fleet operating in the South Coast Air Basin. The dispersion modeling analysis to determine the concentration of DPM at receptor locations was performed using AERMOD. Line-volume sources were placed along roadways within approximately 1/4 mile from the Project Site. Truck idling volume sources were located at the Project's north and south towers where new loading docks would be provided. Based on the results of the AERMOD analysis, the maximum concentration at a sensitive receptor location would occur at the residential use to the southeast of the Project. This is an anticipated result because the predominant winds in the Los Angeles region are from the west, which would tend to disperse pollutants towards the east.

The cancer risk impacts were conservatively estimated using the daily breathing rate factors and exposure factors from Table 9A and Table 9B of Attachment L[40] of the SCAQMD *Risk Assessment Procedures*. The maximum impacts to sensitive residential receptors for the proposed Project would be an incremental increase of approximately 0.19 in one million, which is less than the significance threshold of 10 in one million. The maximum non-cancer impacts for the Project would be an incremental increase in the hazard index of approximately 0.0001, which is less than the threshold of 1.0. This analysis supports the conclusion provided in the EIR that operation of the Project would generate only minor amounts of diesel emissions and that operational health impacts would be less than significant.

39 South Coast Air Quality Management District, CEQA Air Quality Handbook, p. 5-1, 1993.

40 South Coast Air Quality Management District, Risk Assessment Procedures for Rules 1401, 1401.1 & 212, Attachment L, Version 7.0, p. 27, 2012.

Project Operational Health Risk Assessment Results – Maximum Cancer Risk (Significance Threshold is 10 in one million) (refer to Appendix A, Health Risk Assessment Calculations, of this response letter):

- Residential Receptor: 0.19 in one million
- Worker (Commercial) Receptor: < 0.1 in one million

This refined operational HRA was conducted to use Project-specific information and incorporate a reasonable level of conservatism, which means actual risks would likely be lower than stated above. The vehicle exhaust diesel particulate matter emissions were estimated in EMFAC based on the anticipated Project buildout year (i.e., 2023).[41] The analysis conducted for this response assumes that the vehicle emissions would remain at the same rate for the 30-year residential exposure duration. In reality, emission rates would decline in future years as the vehicle fleet turns over and older vehicle models are replaced with newer vehicle models that generate fewer emissions per mile and achieve greater fuel economy pursuant to federal and state vehicle emissions standards. Therefore, the analysis provided for this response is a reasonably conservative overestimation of the actual operational risks that would result from buildout of the Project, and indicates that health risks fall below the applicable thresholds of significance.

(c) Combined Construction and Operational Impacts

When combined, the cancer risk impacts from construction and operation of the Project would also be less than significant. Under a combined construction and operational impact scenario, the maximum combined construction and operational risk for the Project would be 0.47 in one million for the residential receptor and 0.77 in one million for the worker receptor, which would not exceed the significance threshold of 10 in one million. Furthermore, as discussed above, this analysis incorporates reasonably conservative assumptions that overestimate the actual risks that would result from buildout of the Project. Therefore, the risk numbers provided above are overestimated and the actual risks would be lower than stated above.

Comment No. 2-41

Mitigation Measures Available to Reduce Construction Emissions

The Northeast Diesel Collaborative (NEDC) is a regionally coordinated initiative to reduce diesel emissions, improve public health, and promote clean diesel technology. The NEDC recommends that contracts for all construction projects require the following diesel control measures:[29]

[41] As stated on page IV.B-31 of Section IV.B, *Air Quality*, of the Draft EIR, if the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be less than those analyzed and therefore more conservative, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future, pursuant to State regulations that require construction equipment fleet operators to phase-in less polluting heavy-duty equipment. As a result, should the Project commence construction on a later date than modeled in this air quality impact analysis, air quality impacts would be less than the impacts disclosed herein.

- All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85 percent.

- As previously mentioned, MM-AQ-1 requires that "[o]ff-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities associated with grading/excavation/export phase shall meet the Tier 4 standards" (p. IV.B-78). We recommend that all diesel nonroad construction equipment have engines that meet EPA Tier 4 Final nonroad emission standards.

- All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend[30] approved by the original engine manufacturer with sulfur content of 15 parts per million (ppm) or less.

Footnote 29: Diesel Emission Controls in Construction Projects, *available at:* http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf

Footnote 30: Biodiesel lends are only to be used in conjunction with the technologies which have been verified for use with biodiesel blends and are subject to the following requirements: http://www.arb.ca.gov/diesel/verdev/reg/biodieselcompliance.pdf

Response to Comment No. 2-41

MM-AQ-1 has been revised in the Final EIR to require heavy-duty construction equipment equal to or greater than 50 horsepower to meet the Tier 4 Final standards and eliminated the reference to an aggregate of 40 hours or more and the limitation to the grading/excavation/export phase. Refer to the revised MM-AQ-1 in the Mitigation Monitoring Program in the Final EIR and Errata. MM-AQ-1 would apply to generators and already requires Tier 4 Final standards, which is a United States Environmental Protection Agency (USEPA) and CARB verified control technology that reduces particulate matter emissions by a minimum of 85 percent. Biodiesel has been shown to potentially increase NO_X emissions compared to diesel; therefore, biodiesel is not a feasible mitigation measure to reduce NO_X emissions. For example, according to a USEPA, the use of biodiesel can increase NO_X emissions by a small percentage.[42] As a result, biodiesel is not a feasible mitigation to reduce NO_X emissions. No additional mitigation measures in this comment are required to be included for the Project.

Comment No. 2-42

Repower or Replace Older Construction Equipment Engines

The NEDC recognizes that availability of equipment that meets the EPA's newer standards is limited.[31] Due to this limitation, the NEDC proposes actions that can be

[42] U.S. EPA, Renewable Fuel Standard Program (RFS2) Regulatory Impact Analysis, EPA-420-R-10-006, Table 3.2-7 and 3.2-8, 2010.

taken to reduce emissions from existing equipment in the Best Practices for Clean Diesel Construction report.[32] These actions include but are not limited to:

- Repowering equipment (i.e. replacing older engines with newer, cleaner engines and leaving the body of the equipment intact).

Engine repower may be a cost-effective emissions reduction strategy when a vehicle or machine has a long useful life and the cost of the engine does not approach the cost of the entire vehicle or machine. Examples of good potential replacement candidates include marine vessels, locomotives, and large construction machines.[33] Older diesel vehicles or machines can be repowered with newer diesel engines or in some cases with engines that operate on alternative fuels (see section "Use Alternative Fuels for Construction Equipment" for details). The original engine is taken out of service and a new engine with reduced emission characteristics is installed. Significant emission reductions can be achieved, depending on the newer engine and the vehicle or machine's ability to accept a more modern engine and emission control system. It should be noted, however, that newer engines or higher tier engines are not necessarily cleaner engines, so it is important that the Project Applicant check the actual emission standard level of the current (existing) and new engines to ensure the repower product is reducing emissions for DPM.[34]

- Replacement of older equipment with equipment meeting the latest emission standards.

Engine replacement can include substituting a cleaner highway engine for a nonroad engine. Diesel equipment may also be replaced with other technologies or fuels. Examples include hybrid switcher locomotives, electric cranes, LNG, CNG, LPG or propane yard tractors, forklifts or loaders. Replacements using natural gas may require changes to fueling infrastructure.[35] Replacements often require some re-engineering work due to differences in size and configuration. Typically, there are benefits in fuel efficiency, reliability, warranty, and maintenance costs.[36]

Footnote 31:
http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf

Footnote 32:
http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf

Footnote 33: Repair, Rebuild, and Repower, EPA, *available at:* https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#repair

Footnote 34: Diesel Emissions Reduction Program (DERA): Technologies, Fleets and Projects Information, *available at:* http://www2.epa.gov/sites/production/files/2015-09/documents/420p11001.pdf

Footnote 35: Alternative Fuel Conversion, EPA, *available at:* https://www3.epa.gov/otaq/consumer/fuels/altfuels/altfuels.htm#fact

Footnote 36: Cleaner Fuels, EPA, *available at:* https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#cleaner

Response to Comment No. 2-42

The measures suggested in this comment are already covered by MM-AQ-1, which requires heavy-duty construction equipment equal to or greater than 50 horsepower to meet the Tier 4 Final standards. No additional mitigation measures in this comment are required to be included for the Project.

Comment No. 2-43

Install Retrofit Devices on Existing Construction Equipment

PM emissions from alternatively-fueled construction equipment can be further reduced by installing retrofit devices on existing and/or new equipment. The most common retrofit technologies are retrofit devices for engine exhaust after-treatment. These devices are installed in the exhaust system to reduce emissions and should not impact engine or vehicle operation.[37] It should be noted that actual emissions reductions and costs will depend on specific manufacturers, technologies and applications. Should the Applicant be unable to obtain Tier 4 Interim or Tier 4 Final off-road equipment engines for all pieces of equipment with 50 hp or greater, the Applicant should consider use of engines that meet Tier 3 off-road emission standards and engines that are retrofitted with an ARB Level 2 or Level 3 Verified Diesel Emissions Control Strategy (VDECS).

Footnote 37: Retrofit Technologies, EPA, *available at:* https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#retrofit

Response to Comment No. 2-43

The measures suggested in this comment are already covered by MM-AQ-1, which requires heavy-duty construction equipment equal to or greater than 50 horsepower to meet the Tier 4 Final standards. No additional mitigation measures in this comment are required to be included for the Project.

Comment No. 2-44

Use Electric and Hybrid Construction Equipment

CAPCOA's Quantifying Greenhouse Gas Mitigation Measures[38] report also proposes the use of electric and/or hybrid construction equipment as a way to mitigate DPM emissions. When construction equipment is powered by grid electricity rather than fossil fuel, direct emissions from fuel combustion are replaced with indirect emissions associated with the electricity used to power the equipment. Furthermore, when construction equipment is powered by hybrid-electric drives, emissions from fuel combustion are also greatly reduced. Electric construction equipment is available commercially from companies such as Peterson Pacific Corporation,[39] which specialize in the mechanical processing equipment like grinders and shredders. Construction equipment powered by hybrid-electric drives is also commercially available from companies such as Caterpillar[40]. For example, Caterpillar reports that during an 8- hour

shift, its D7E hybrid dozer burns 19.5 percent fewer gallons of fuel than a conventional dozer while achieving a 10.3 percent increase in productivity. The D7E model burns 6.2 gallons per hour compared to a conventional dozer which burns 7.7 gallons per hour.[41] Fuel usage and savings are dependent on the make and model of the construction equipment used. The Project Applicant should calculate project- specific savings and provide manufacturer specifications indicating fuel burned per hour.

Footnote 38: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Footnote 39: Peterson Electric Grinders Brochure, *available at:* http://www.petersoncorp.com/wp-content/uploads/peterson_electric_grinders1.pdf

Footnote 40: Electric Power Products, *available at:* http://www.cat.com/en_US/products/new/power-systems/electric-power-generation.html

Footnote 41: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Response to Comment No. 2-44

The measures suggested in this comment are already covered by MM-AQ-1, which requires heavy-duty construction equipment equal to or greater than 50 horsepower to meet the Tier 4 Final standards. In addition, MM-AQ-1 requires cranes and signal boards to be electric. The use of other electric-powered equipment is not required to reduce impacts to less than significant. The significant air quality impact associated with the temporary and short-term construction NO_X emissions during the two continuous concrete pouring foundation phases of Project construction is overwhelmingly the result of emissions from concrete trucks required to deliver and pour the concrete at the Project Site. As discussed in Response to Comment 2-9, the Lead Agency has conservatively added the following subparagraph d. to MM AQ-1 to ensure the maximum use of 2010 model or newer engines during the concrete pouring foundation phases:

> d. All concrete trucks used during the Project's concrete pouring foundation shall have 2010 model or newer engines. Prior to issuance of a building permit, the applicant shall provide evidence (such as copies of contracts with concrete subcontractors with specifications or engine certifications) satisfactory to the Department of City Planning demonstrating compliance with this measure.

However, this added measure would not reduce the NOx emission levels during the concrete pouring phases to below the applicable significance threshold, and impacts would remain significant.[43] The measures for off-road equipment suggested in this comment would not reduce the NO_X emissions during the two continuous concrete pouring foundation phases of Project construction. Therefore, no additional mitigation measures in this comment are required to be included for the Project.

[43] Letter dated February 28, 2020 attached as Appendix D.

Comment No. 2-45

Implement a Construction Vehicle Inventory Tracking System

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*[42] report recommends that the Project Applicant provide a detailed plan that discusses a construction vehicle inventory tracking system to ensure compliances with construction mitigation measures. The system should include strategies such as requiring engine run time meters on equipment, documenting the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment and daily logging of the operating hours of the equipment. Specifically, for each onroad construction vehicle, nonroad construction equipment, or generator, the contractor should submit to the developer's representative a report prior to bringing said equipment on site that includes:[43]

- Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number.
- The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level.
- The Certification Statement[44] signed and printed on the contractor's letterhead.

Furthermore, the contractor should submit to the developer's representative a monthly report that, for each on- road construction vehicle, nonroad construction equipment, or generator onsite, includes:[45]

- Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
- Any problems with the equipment or emission controls.
- Certified copies of fuel deliveries for the time period that identify:
    - Source of supply
    - Quantity of fuel
    - Quality of fuel, including sulfur content (percent by weight).

In addition to these measures, we also recommend that the Applicant implement the following mitigation measures, called "Enhanced Exhaust Control Practices,"[46] that are recommended by the Sacramento Metropolitan Air Quality Management District (SMAQMD):

1. The project representative shall submit to the lead agency a comprehensive inventory of all off- road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project.

- The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment.

- The project representative shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.

- This information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment.

- The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.

2. The project representative shall provide a plan for approval by the lead agency demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet- average 20% NOX reduction and 45% particulate reduction compared to the most recent California Air Resources Board (ARB) fleet average.

    - This plan shall be submitted in conjunction with the equipment inventory.

    - Acceptable options for reducing emissions may include use of late model engines, low- emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

    - The District's Construction Mitigation Calculator can be used to identify an equipment fleet that achieves this reduction.

3. The project representative shall ensure that emissions from all off-road diesel-powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour.

    - Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately. Non-compliant equipment will be documented and a summary provided to the lead agency monthly.

    - A visual survey of all in-operation equipment shall be made at least weekly.

    - A monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.

4. The District and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this mitigation shall supersede other District, state or federal rules or regulations.

These measures offer a cost-effective, feasible way to incorporate lower-emitting equipment into the Project's construction fleet, which subsequently reduces NOx and DPM emissions released during Project construction. An updated DEIR must be prepared to include additional mitigation measures, as well as include an updated air quality assessment to ensure that the necessary mitigation measures are implemented to reduce construction emissions. Furthermore, the Project Applicant needs to demonstrate commitment to the implementation of these measures prior to Project approval to ensure that the Project's construction-related emissions are reduced to the maximum extent possible.

Footnote 42: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Footnote 43: Diesel Emission Controls in Construction Projects, *available at:* http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf

Footnote 44: Diesel Emission Controls in Construction Projects, *available at:* http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf The NEDC Model Certification Statement can be found in Appendix A.

Footnote 45: Diesel Emission Controls in Construction Projects, *available at:* http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf

Footnote 46: http://www.airquality.org/ceqa/Ch3EnhancedExhaustControl_10-2013.pdf

Response to Comment No. 2-45

The measures suggested in this comment are already covered by MM-AQ-1, which requires that during plan check, the Project representative shall make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used during any of the construction phases. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. MM-AQ-1 further requires a copy of each such unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit to be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the on-site equipment with the inventory and certified Tier specification and operating permit. Implementation of MM-AQ-1 would result in the reduction of diesel particulate matter and NO_X exhaust emissions from the Project's construction equipment by over approximately 90 percent and 80 percent, respectively, as compared to the fleet average emissions for construction equipment and vehicles (refer to emissions reductions in Table IV.B-12 and Table IV.B-13 compared to the emissions shown in Table IV.B-8 and Table IV.B-9 of the Draft EIR). Opacity is already regulated by SCAQMD Rule 401

(Visible Emissions), which is more stringent than the opacity measure provided in this comment and is discussed on page IV.B-8 of the Draft EIR. No additional mitigation measures in this comment are required to be included for the Project.

Comment No. 2-46

Use of Materials that Do Not Require Paint

Using materials that do not require painting is a common mitigation measure where VOC emissions are a concern. Interior and exterior surfaces, such as concrete, can be left unpainted.

Response to Comment No. 2-46

The Project would not result in significant impacts related to VOC emissions. Therefore, this mitigation measure is not warranted.

Comment No. 2-47

Use of Spray Equipment with Greater Transfer Efficiencies

Various coatings and adhesives are required to be applied by specified methods such as electrostatic spray, high- volume, low-pressure (HVLP) spray, roll coater, flow coater, dip coater, etc. in order to maximize the transfer efficiency. Transfer efficiency is typically defined as the ratio of the weight of coating solids adhering to an object to the total weight of coating solids used in the application process, expressed as a percentage. When it comes to spray applications, the rules typically require the use of either electrostatic spray equipment or HVLP spray equipment. The SCAQMD is now able to certify HVLP spray applicators and other application technologies at efficiency rates of 65 percent or greater.[47]

These measures offer a cost- effective, feasible way to incorporate lower- emitting equipment into the Project's construction fleet, which subsequently reduces DPM emissions released during Project construction. Furthermore, these measures also offer a feasible way to reduce the construction-related ROG emissions released from paints and architectural coatings. A revised DEIR must be prepared to include additional mitigation measures, as well as include an updated air quality assessment to ensure that the necessary mitigation measures are implemented to reduce construction emissions. Furthermore, the Project Applicant needs to demonstrate commitment to the implementation of these measures prior to Project approval to ensure that the Project's construction- related emissions are reduced to the maximum extent possible.

Footnote 47: http://www.aqmd.gov/home/permits/spray-equipment-transfer-efficiency

Response to Comment No. 2-47

The Project would not result in significant impacts related to VOC or particulate matter emissions. Therefore, this mitigation measure is not warranted.

Comment No. 2-48

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR determines that the Project's GHG impact would be less than significant as a result of consistency with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAn (p. IV.E-38). The DEIR also quantifies emissions, but fails to compare them to the SCAQMD's bright-line threshold, claiming that the SCAQMD has not adopted a GHG significance threshold for land use development projects (p. IV.E-18). Specifically, the DEIR states,

> "In the absence of any adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with *CEQA Guidelines* Section 15064.4(b) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. The 2016-2040 RTP/SCS is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the state's long-term climate goals. CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the City's *LA Green Plan,* and *Sustainable City pLAn* all apply to the Project and are all intended to reduce GHG emissions to meet the statewide targets set forth in AB 32. Thus, the Lead Agency has determined that the Project would not have a significant effect on the environment if the Project is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, and the City's *LA Green Plan,* and *Sustainable City pLAn*" (emphasis added) (p. IV.E-38).

This justification and subsequent less-than-significant impact finding is incorrect and unsubstantiated for several reasons:

(1) The California Air Resources Board ("CARB") 2017 Scoping Plan and the Southern California Association of Governments ("SCAG") Regional Transportation Plan/Sustainable Community Strategies ("RTP/SCS") cannot be relied upon to determine Project significance;

(2) The City's *LA Green Plan* and *Sustainable City pLAn* do not meet the criteria for an officially adopted GHG reduction plan;

(3) The DEIR conducts an incorrect and unsubstantiated analysis of the Project's GHG emissions;

(4) Notwithstanding the flawed air model discussed above, the Project's estimated GHG emissions exceed applicable bright-line and efficiency thresholds, thus resulting in a significant impact that was not previously identified or addressed by the DEIR;

(5) The DEIR's failure to apply the SCAQMD's bright-line and efficiency thresholds to Project emissions is inconsistent with evolving scientific knowledge and regulatory schemes.

Response to Comment No. 2-48

The commenter states that the EIR applied the incorrect significance threshold for GHG emissions and that it should have used SCAQMD's proposed but never adopted interim thresholds from 2008. The City has not developed a quantitative GHG emissions threshold. As the Draft EIR explains on page IV.E-18 of Section IV.E, Greenhouse Gas Emissions, the SCAQMD has also not adopted a GHG significance threshold applicable to the Project. In the absence of adopted thresholds, the City has the discretion to select a significance threshold relevant to the proposed Project.

State CEQA Guidelines Section 15064.4 states that a lead agency shall make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency has the discretion to determine, in the context of a particular project, whether to: (1) use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; ***or*** (2) rely on a qualitative analysis or performance based standards.

As discussed in detail under Subsection IV.E.3.c, Project Impacts, Thresholds of Significance, of Section IV.E, Greenhouse Gas Emissions, of the Draft EIR, in the absence of any adopted quantitative threshold, the City has determined that the Project would not have a significant effect on the environment if the Project is found to be consistent with applicable regulatory plans and policies to reduce GHG emissions, including the emissions reduction measures discussed within CARB's Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, and the City's LA Green Plan, Sustainable City pLAn, and Green Building Code. Therefore, if the Project does not conflict with these plans, the City will be able to achieve its GHG reduction goals, and, therefore, these plans can be used at a project level to show a project's consistency with the plans.

In addition, support for this threshold is found in recent California Supreme Court case law, such as *Center for Biological Diversity et al. vs. California Department of Fish and Wildlife* and *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 576.).

Thus, the City has exercised its discretion to utilize a qualitative threshold based on consistency with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAn. As explained on pages IV.E-36 through IV.E-38 (which describes the approach to the analysis) and pages IV.E-39 through IV.E-75 (which provides the analysis and the results of the analysis) of Section IV.E, *Greenhouse Gas Emissions*, of the Draft EIR, the Project is consistent with the applicable provisions of these plans. Therefore, the EIR properly concluded that the Project's GHG impacts are less than significant.

Comment No. 2-49

1) Failure to Demonstrate Additionality

The DEIR's reliance on the CARB 2017 Scoping Plan and SCAG's RTP/SCS is inadequate, as projects must incorporate emissions reductions measures beyond those that comprise basic requirements. Just because "a project is designed to meet high building efficiency and conservation standards … does not establish that its [GHG] emissions from transportation activities lack significant impacts." *Newhall Ranch*, 62 Cal.4th at 229 (citing Natural Resources Agency).[48] This concept is known as "additionality" whereby GHG emission reductions otherwise required by law or regulation are appropriately considered part of the baseline and, pursuant to CEQA Guideline § 15064.4(b)(1), a new project's emissions should be compared against that existing baseline.[49] Hence, a "project should not subsidize or take credit for emissions reductions which would have occurred regardless of the project."[50] In short, as observed by the Court, newer developments must be more GHG-efficient. *See Newhall Ranch,* 62 Cal.4th at 226.

Furthermore, CARB asserts that SCAG's RTP/SCS is not enough, and recently found that California "***is not on track***" to meet GHG reductions expected under SB 375 (i.e., Sustainable Communities Strategy).[51] As warned by CARB (emphasis added), "with emissions from the transportation sector continuing to rise despite increases in fuel efficiency and decreases in the carbon content of fuel, ***California will not achieve the necessary [GHG] emissions reductions to meet mandates for 2030*** and beyond …."[52] This is further supported by two recent climate change reports where scientists described (emphasis added) the ***quickening rate of carbon dioxide emissions as a "speeding freight train***" with an unexpected surge in people buying more cars and driving them farther than in the past — "***more than offsetting any gains from the spread of electric vehicles***."[53] Therefore, the Project may require more GHG-reducing measures to offset the lost GHG reductions anticipated under the outdated, unmonitored GGRP, such as the net-zero approach utilized in the wake of the Supreme Court's *Newhall Ranch* decision. *See Newhall Ranch,* 62 Cal.4th at 226 ("a greater degree of reduction may be needed from new land use projects …."); *see also Californians for Alternatives to Toxics v. Department of Food and Agriculture* (2005) 136 Ca1.App.4th 1, 17 ("[c]ompliance with the law is not enough to support a finding of no significant impact under the CEQA."). Additional reduction efforts may be required for the Project, including those new, feasible mitigation measures found in CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures,* which attempt to reduce GHG levels.

Footnote 48: See California Natural Resources Agency (Dec. 2009) Final Statement of Reasons for Regulatory Action: Amendments to State CEQA Guidelines Addressing Analysis and Mitigation of GHG Emissions Pursuant to SB-97, p. 23 (while a Platinum LEED® rating may be relevant to emissions from a building's energy use, "that performance standard may not reveal sufficient information to evaluate transportation-related emissions associated with that proposed project"), http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf.

Footnote 49: *Ibid.*, p. 89; see also CAPCOA (Aug. 2010) Quantifying Greenhouse Gas Mitigation Measures, p. 32, A3 ("… in practice is that if there is a rule that requires, for example, increased energy efficiency in a new building, the project proponent cannot count that increased efficiency as a mitigation or credit unless the project goes beyond what the rule requires; and in that case, only the efficiency that is in excess of what is required can be counted."), http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

Footnote 50: *Ibid.*, CAPCOA, p. 433.

Footnote 51: CARB (Nov. 2018) 2018 Progress Report, p. 4-7 (emphasis added), https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf.

Footnote 52: *Ibid.*

Footnote 53: New York Times (12/5/18) Greenhouse Gas Emissions Accelerate Like a 'Speeding Freight Train' in 2018 (emphasis added), https://www.nytimes.com/2018/12/05/climate/greenhouse-gas-emissions-2018.html; see *also* Global Carbon Project (Dec. 2018) Global Carbon Budget 2018, https://www.earth-syst-sci- data.net/10/2141/2018/essd-10-2141-2018.pdf; R.B. Jackson, et al. (Dec. 2015) Global Energy Growth Is Outpacing Decarbonization, http://iopscience.iop.org/article/10.1088/1748-9326/aaf303/pdf.

Response to Comment No. 2-49

The commenter maintains that the EIR fails to demonstrate the "additionality" concept whereby GHG emissions reductions otherwise required by law or regulation are appropriately considered part of the baseline, and pursuant to CEQA Guideline 15064.4(b)(1), a new project's emissions should be compared against the existing baseline and a project should not take credit for emissions reductions that would have occurred regardless of the project. The commenter suggests that the state is not on track to meet GHG reduction targets. The commenter also states the proposed Project may require more GHG-reducing measures to offset the lost GHG reductions anticipated under the GGRP and additional reduction measures should be required for the proposed Project to attempt to reduce GHG levels.

The commenter mischaracterizes the California Supreme Court's decision in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204 (also known as the Newhall Ranch case). As a preliminary matter, the Court does not even mention "additionality" in its decision. Rather, the Court reviewed the methodology used to analyze GHG emissions in an EIR prepared for a project that proposed 20,885 dwelling units with 58,000 residents on 12,000 acres of undeveloped land in a rural area of the County of Los Angeles. The EIR used a departure from "business as usual" (BAU) approach to determine whether the project would impede the state's compliance with statutory emissions reduction mandate established by the AB 32 Climate Change Scoping Plan. The Court did not invalidate the BAU approach but did hold that "the Scoping Plan nowhere related that statewide level of reduction effort to the percentage

of reduction that would or should be required from individual projects and nothing DFW or Newhall have cited in the administrative record indicates the required percentage reduction from business as usual is the same for an individual project as for the entire state population and economy." (Id. at 230.) The California Supreme Court suggested regulatory consistency as one pathway to compliance, by stating that a lead agency might assess consistency with AB 32's goal in whole or in part by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities, including statewide programs and local climate action plans or GHG emissions reduction plans. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of GHG emissions.

The Newhall Ranch case does not even mention the word "additionality," much less require that a project exceed requirements in applicable GHG reduction plans. Rather, the Supreme Court stated: "To the extent a project's design features ***comply with or*** exceed the regulations outlined in the Scoping Plan and adopted by the Air Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a... plan for the reduction or mitigation of greenhouse gas emissions." (Emphasis added.)

Regarding the state's progress on reducing GHG emissions, CARB recently found:

> *In 2017, emissions from statewide emitting activities were 424 million metric tons of CO_2 equivalent ($MMTCO_2e$), which is 5 $MMTCO_2e$ lower than 2016 levels. 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 $MMTCO_2e$ below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 tonnes per person to 10.7 tonnes per person in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining. From 2000 to 2017, the carbon intensity of California's economy has decreased by 41 percent from 2001 peak emissions while simultaneously increasing GDP by 52 percent. In 2017, GDP grew 3.6 percent while the emissions per GDP declined by 4.5 percent compared to 2016.*[44]

Moreover, no additional mitigation measures are warranted as the proposed Project's impacts with respect to GHG emissions would be less than significant. The Project's analysis of GHG emission impacts does not subsidize or take credit for emissions reductions which would have occurred regardless of the project. As discussed in great detail on pages IV.E-78 through -82 of Section IV.E, *Greenhouse Gas Emissions*, of the Draft EIR, the Project would represent an urban infill development, since it would be undertaken on a currently developed property, and would be located near existing off-site commercial, residential, and retail destinations and in close proximity to existing

[44] California Air Resources Board, California Greenhouse Gas Emissions for 2000 to 2017, Trends of Emissions and Other Indicators, 2019.

public transit stops. Infill development results in reduced vehicle trips and vehicle miles traveled, and reduced associated transportation-related emissions compared to a project without these Project Site-specific land use characteristics. As discussed on pages IV.E-78 through -82 of the Draft EIR, the Project's increased density, location efficiency, increased land use diversity and mixed-uses, increased destination accessibility, increased transit accessibility, improved design of development, and pedestrian network improvements would reduce the Project's GHG emissions. Furthermore, the Project would incorporate Project Design Features that would further reduce GHG emissions including incorporating green building designs that would meet the LEED Silver Certification or equivalent (PDF-AQ-1), provide more electric vehicle parking capable spaces than required by existing regulations (PDF-AQ-2), and including water conservation features beyond regulatory requirements that would reduce GHG emissions from the conveyance of water (PDF-WS-1). These Project Design Features would be fully enforceable by the Lead Agency as conditions of approval. The Project's GHG reductions from its land use characteristics and Project Design Features are not required of all land use development projects by law or regulation. These are reductions that would be a result of the Project's design and its specific land use characteristics and location and would be additional to existing regulations.

Based on the substantial evidence discussed above, and explained in detail in Section IV.E, *Greenhouse Gas Emissions*, of the Draft EIR (pages IV.E-39 through IV.E-91), the Lead Agency has determined that the Project would result in less than significant Project-level and cumulative-level GHG impacts.

Comment No. 2-50

2) The City's LA Green Plan and Sustainable City pLAn are not CAPs

The DEIR determines that the Project's GHG impact would be less than significant as a result of consistency with the City's LA Green Plan and Sustainable City pLAn (p. IV.E-38). However, these regulatory plans do not meet the criteria for an officially adopted GHG reduction program, commonly referred to as a Climate Action Plan ("CAP"), for use as a threshold of significance for GHG emissions. As the CEQA Guidelines §§ 15064.4(b)(3) and 15183.5(b)(1) make clear, a qualified CAP "must be adopted by the relevant public agency through a public review process," and the CAP should include:

(1) **Inventory:** Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities (e.g., projects) within a defined geographic area (e.g., lead agency jurisdiction);

(2) **Establish GHG Reduction Goal:** Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;

(3) **Analyze Project Types:** Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;

(4) **Craft Performance Based Mitigation Measures:** Specify measures or a group of measures, including performance standards, that substantial evidence

demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;

(5) **Monitoring:** Establish a mechanism to monitor the CAP progress toward achieving said level and to require amendment if the plan is not achieving specified levels;

Here, the DEIR fails to demonstrate that the LA Green Plan and Sustainable City pLAn include the above-listed requirements to be considered a qualified CAP for the City. As such, the DEIR leaves an analytical gap showing that compliance with said plans can be used for project-level significance determination. Thus, compliance with these regulatory plans and policies should not be used as a threshold with which to determine the significance of the proposed Project's GHG impact.

Response to Comment No. 2-50

The commenter incorrectly interprets State *CEQA Guidelines* Sections 15064.4(b)(3) and 15183.5 in asserting that a project must be consistent with an adopted Climate Action Plan (CAP). CEQA Guidelines § 15064.4(b)(3) allows a lead agency to consider "[t]he extent to which the project complies with regulations or requirements adopted to implement a ***statewide, regional, or local plan*** for the reduction or mitigation of greenhouse gas emissions." (Emphasis added.) Moreover, the 2016 RTP/SCS as a CARB-certified GHG reduction plan. Section 15183.5(a) provides that a lead agency "may analyze and mitigate the significant effects of GHG emissions at the programmatic level, such as a general plan, a long-range development, or a separate plan to reduce greenhouse gas emissions." The CARB Scoping Plan, SCAG's RTP/SCS, SB 32, SB 375, and the LA Green Building Code have all undergone a public review process and are applicable planning policies and/or development regulations. The EIR does not state or infer that any of the applicable planning documents referenced serve as a CAP for purposes of setting a GHG threshold of significance. Therefore, the commenter's assertion that a CAP is required to properly analyze GHGs is erroneous, and its assertion that and the City's LA Green Plan and Sustainable City pLAn may not qualify as CAPs is irrelevant. Refer also to Response to Comment No. 2-49.

Comment No. 2-51

3) Incorrect and Unsubstantiated Analysis of Greenhouse Gas Emissions

In addition to the Project's incorrect reliance upon consistency with plans and regulations to determine Project significance, the DEIR fails to adequately compare the Project's annual GHG emissions to the applicable SCAQMD threshold.

Review of the DEIR demonstrates that the Project would produce 14,922 metric tons of CO_2 equivalents per year (MT CO_2e/year) (see excerpt below) (IV.E-85, Table IV.E-9).

TABLE IV.E-9
ANNUAL GREENHOUSE GAS EMISSIONS

Emissions Sources	Project CO_2e (Metric Tons per Year) [a,b]	
	Project Without GHG Reduction Characteristics, Features, and Measures	Proposed Project
Existing Site (refer to Table IV.E-2)	7,125	7,125
Proposed Project Operational		
On-Road Mobile Sources[c]	17,397	11,800
Stationary (Emergency Generators)	27	27
Area	20	20
Electricity	9,448	6,862
Natural Gas	1,869	1,846
Water Conveyance and Wastewater Treatment	663	505
Solid Waste	242	242
Construction (Amortized)	745	745
Proposed Subtotal	30,411	22,047
Percent Reduction (Project Only)	—	28%
Net Operational (Proposed – Existing)	23,286	14,922
Percent Reduction (Net Operational Total)	—	36%

[a] Totals may not add up exactly due to rounding in the modeling calculations.
[b] Detailed GHG emissions assumptions and calculations are provided in Appendix F-2 and Appendix F-3 of the GHG Technical Report
[c] On-road Mobile Sources: 17,397 - 11,800 = 5,597/17,397 = 32.2% reduction.

SOURCE: ESA, 2018.

As you can see in the excerpt above, the DEIR concludes that the Project will produce 14,922 MT CO_2e/year from construction and operation. However, the DEIR fails to compare these emissions to relevant thresholds, claiming that the SCAQMD has not adopted a GHG significance threshold for land use development projects (p. IV.E-18). While the DEIR is correct in stating that the SCAQMD *Interim Thresholds* were never adopted, this does not mean, however, that they are inapplicable to the proposed Project or otherwise can be ignored. As explained below, consistent with CEQA Guidelines, the SCAQMD's interim thresholds should have been used by the DEIR. It is commonly recognized by California air districts that a project's impact on climate change is

cumulative in nature.[54] According to the Technical Advisory prepared by the Office of Planning and Research ("OPR"), "[t]he potential effects of a project may be individually limited but cumulatively considerable[]" and that "[l]ead agencies should not dismiss a proposed project's direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence … [including] analysis should be provided for any project that may significantly contribute to new GHG emissions, either individually or cumulatively, directly or indirectly."[55] Furthermore, OPR rightfully acknowledge, consistent with state regulatory scheme and CEQA case law, that "thresholds cannot be used to determine automatically whether a given effect will or will not be significant; instead, thresholds of significance can be used only as a measure of whether a certain environmental effect will normally be determined to be significant or normally will be determined to be less than significant by the agency."[56] Recognizing this principle, CEQA Guidelines 15064.7(c) permit the use of thresholds developed by other public agencies.

Similarly, the California Supreme Court has made clear that CEQA demands robust GHG analysis to assess a project's impact on climate change, and while lead agencies have discretion, that discretion must be exercised "based to the extent possible on scientific and factual data" and "stay[ing] in step with evolving scientific knowledge and state regulatory schemes." *Cleveland National Forest Foundation San Diego Assn. of Governments* ("Cleveland II") (2017) 3 Cal.5th 497, 504, 515, 518 (quoting CEQA Guidelines § 15064(b)); see also 519 (noting to meet the State's long-term climate goals, "regulatory clarification, together with improved methods of analysis, may well change the manner in which CEQA analysis of long-term [GHG] emission impacts is conducted."). Hence, a GHG analysis which "understates the severity of a project's impacts impedes meaningful public discussion and skews the decision maker's perspective concerning the environmental consequences of the project, the necessity for mitigation measures, and the appropriateness of project approval." *Id.*, on remand ("Cleveland III"), 17 Cal.App.5th 413, 444; see also *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564 (quoting *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 392).

SCAQMD's multi-tiered approach under its *Interim Threshold* was not officially adopted as a valid threshold or part of a plan "adopted by the relevant public agency through a public review process" as CEQA requires.[57] Moreover, SCAQMD developed its thresholds when AB 32 was the governing statute for GHG reductions in California. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020. Health & Saf. Code § 38500 *et seq*. However, in September 2016, before the release of the DEIR, Governor Brown signed Senate Bill 32, enacting Health & Saf. Code § 38566. This statute ("SB 32") requires California to achieve a new, more aggressive 40 percent reduction in GHG emissions over the 1990 level by the end of 2030. As a result, the Project's reliance on AB 32 is incorrect and the Project must instead comply with Senate Bill 32 (SB 32), which would include a more aggressive GHG threshold.

Consistent with the edicts of SB 32, other air control districts have adopted more aggressive GHG thresholds for project-level analysis, including but not limited to the Sacramento Metropolitan Air Quality Management District (SMAQMD), the Bay Area Air

Quality Management District (BAAQMD), and the San Luis Obispo Air Pollution Control District (SLOAPCD) (as summarized in the tables below). Given the cumulative nature

SMAQMD (May 2018) Guide to Air Quality Assessment[58]

Land Development and Construction Projects		
	Construction Phase	Operational Phase
Greenhouse Gas Emissions (GHG) Thresholds		
GHG as CO2e	1,100 metric tons/year	1,100 metric tons/year

Stationary Source Only		
	Construction Phase	Operational Phase
Greenhouse Gas Emissions (GHG) Thresholds		
GHG as CO2e	1,100 metric tons/year	10,000 metric tons/year

of GHG emissions and consistent with CEQA Guidelines § 15064.7(c), these recommended thresholds are appropriate for projects in the SCAQMD regions.

1) Construction phase of all project types – 1,100 MT CO_2e/yr.

2) Operational phase of a land development project – 1,100 MT CO_2e/yr (noting a 72-room hotel and a 122-unit high-rise apartment building would each be equivalent to the 1,100 MT CO_2e/yr threshold).[59]

3) Stationary source operational emissions – 10,000 MT CO_2e/yr.

BAAQMD (May 2017) CEQA Air Quality Guidelines[60]

GHGs – Projects other than Stationary Sources	Compliance with Qualified GHG Reduction Strategy OR 1,100 MT of CO_2e/yr OR 4.6 MT CO_2e/SP/yr (residents+employees)
GHGs –Stationary Sources	10,000 MT/yr

While providing 10,000 MT CO_2e/yr for stationary-source projects, other projects (e.g., residential, commercial, public land uses):

1) CAP: Compliance with a qualified GHG Reduction Strategy; or

2) Bright Line: Annual emissions less than 1,100 MT CO_2e/year; or

3) Efficiency Level: 4.6 MT CO_2e/SP/year (residents + employees).[61]

SLOAPCD (Mar. 2012) GHG Thresholds and Supporting Evidence[62]

GHG Emissions Threshold Summary	
Residential and Commercial Projects	**Compliance with Qualified GHG Reduction Strategy** OR **Bright-Line Threshold of 1,150 MT of CO_2e/yr.** OR **Efficiency Threshold of 4.9 MT CO_2e/SP*/yr.**
Industrial (Stationary Sources)	**10,000 MT of CO_2e/yr.**

1) CAP: Consistency with qualitative reduction strategies (e.g., Climate Action Plans).

2) Bright-Line Threshold: 1,150 MT CO_2e/year after inclusion of emission-reducing features of a proposed project, those still exceeding the threshold would have to reduce their emissions below that level to be considered less than significant.

3) Efficiency-Based Threshold: 4.9 MT CO_2e/SP/year dependent on per capita basis for residential projects or the sum of jobs and residents for mixed-use projects (noting 0.64 employees per 1,000 SF of hotel development).

Although more demanding, the above-listed thresholds adopted by these air districts are analogous with the application of SCAQMD's screening threshold for mixed-use developments (3,000 MT CO_2e/year) and SCAQMD's Tier 4 efficiency target goals (4.8 MTCO_2e/SP/year for target year 2020 and 3.0 MTCO_2e/SP/year for target year 2035).[63] The actions taken by other air districts to reduce GHG emissions through more stringent thresholds is the most persuasive rationale as to why the *Interim Thresholds* apply as the current standard set of evolving scientific knowledge and regulatory schemes.

Even though the SCAQMD's interim thresholds may be outdated and may not be adopted, they are consistent with the methods of analysis that is regularly practiced by other air districts and furthers CEQA's demand for "'conservative analysis' to afford 'fullest possible protection of the environment.'"[64] Hence, the DEIR's GHG analysis is not consistent with evolving standards, nor is the conclusion that the Project has a less than significant GHG impact supported by substantial evidence.

Finally, the DEIR's quantification of Project GHG emissions is incorrect considering that it relies on a flawed CalEEMod model to determine emissions. As previously discussed, the DEIR's CalEEMod model fails to include all proposed land uses and relies on an incorrect land use size, incorrect land use population, unsubstantiated mitigation to construction equipment fuel type, incorrect number of worker trips, and incorrectly applied construction mitigation measures. As a result, the DEIR's CalEEMod models underestimate emissions and should not be relied upon to assess the Project's GHG emissions.

Footnote 54: See *e.g.*, SCAQMD (Oct. 2008), supra fn. 28, p. 1-4-5 (citing the OPR Technical Advisor: "When assessing whether a project's effects on climate change are 'cumulatively considerable' even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects."), http://www.aqmd.gov/docs/default- source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf; Bay Area Air Quality Management District ("BAAQMD") (May 2017) CEQA Air Quality Guidelines, p. 2-1 ("No single project could generate enough GHG emissions to noticeably change the global average temperature [but rather] [t]he combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts."), http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en; San Luis Obispo County Air Pollution Control District ("SLOAPCD") (Mar. 28, 2012) GHG Threshold and Supporting Evidence, p. 5 ("No single land use project could generate enough GHG emissions to noticeably change the global average temperature. Cumulative GHG

emissions, however, contribute to global climate change and its significant adverse environmental impacts. Thus, the primary goal in adopting GHG significance thresholds, analytical methodologies, and mitigation measures is to ensure new land use development provides its fair share of the GHG reductions needed to address cumulative environmental impacts from those emissions.), https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/Greenhouse%20Gas%20Thresholds%20and%20Supporting%20Evidence%204-2- 2012.pdf; Sacramento Metropolitan Air Quality Management District ("SMAQMD") (May 2018) Guide to Air Quality Assessment in Sacramento County, p. 6-1-3, ("(GHG) emissions adversely affect the environment through contributing, on a cumulative basis, to global climate change … *the District recommends that lead agencies address the impacts of climate change on a proposed project and its ability to adapt to these changes in CEQA documents*… [thus urging] evaluating whether the GHG emissions associated with a proposed project will be responsible for making a cumulatively considerable contribution to global climate change."[emphasis original]), http://www.airquality.org/LandUseTransportation/Documents/Ch6GHGFinal5-2018.pdf.

Footnote 55: OPR (June 19, 2008) Technical Advisory on CEQA and Climate Change, p. 6, http://opr.ca.gov/docs/june08-ceqa.pdf.

Footnote 56: OPR (Nov. 2017) Proposed Updates to the CEQA Guidelines, p. 7 (citing CEQA Guidelines §§ 15064 and 15064.7 and *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1108-1109), http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf.

Footnote 57: SCAQMD (Dec. 5, 2008), *supra* fn. 50, p. 3.

Footnote 58: SMAQMD (May 2018), supra fn. 50, p. 6-10-12; see also SMAQMD Thresholds of Significance Table, http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf.

Footnote 59: SMAQMD (Apr. 2018) SMAQMD Operational Screening Levels (showing that a 190-room hotel like Option A or a 160-unit high-rise apartment like Option B would exceed the 72-room and 122-unit thresholds), http://www.airquality.org/LandUseTransportation/Documents/Ch4+Ch6OperationalScreening4-2018.pdf.

Footnote 60: BAAQMD (May 2017), *supra* fn. 50, p. 2-2-4. Like the SCAQMD area, BAAQMD is designated as a nonattainment area for state/national ozone and particulate matter (PM) and thresholds would seem particularly apt for the 5th and Hill Project. *Compare id.* at p. 2-1 with SCAQMD NAAQS/CAAQS Attainment Status (noting "extreme" and "serious" nonattainment for multiple ozone and PM standards), http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf.

Footnote 61: The BAAQMD has not formally adopted an efficiency level after 2020. However, other projects within BAAQMD's jurisdiction have extrapolated 2030 efficiency thresholds in order to comply with SB 32 reduction targets. For example, the Park View Towers Project's Addendum to the Final Supplemental Environmental Impact Report utilizes a 2030 efficiency threshold of 2.6 MT CO_2e/year. Based on this efficiency threshold, the proposed Project would exceed threshold and result in a significant impact. Park View Tower's Addendum *available at:* http://www.sanjoseca.gov/DocumentCenter/View/80743

Footnote 62: SLOAPCD (Mar. 28, 2012), supra fn. 50, p. 25-30, 42.

Footnote 63: See SCAQMD (Dec. 5, 2008) Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2; *see also* SCAQMD (Oct. 2008) Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, http://www.aqmd.gov/docs/default- source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf; SCAQMD (Sep. 28, 2010) Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group # 15, http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf.

Footnote 64: "Warehouse Truck Trip Study Data Results and Usage Presentation: Inland Empire Logistics Council." SCAQMD, June 2014, http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for- air-quality-analysis/final-ielc_6-19-2014.pdf?sfvrsn=2, p. 3; *see also Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 390 ("The foremost principle under CEQA is that the Legislature intended the act to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.") (internal citations omitted).

Response to Comment No. 2-51

Again, as described above in Response to Comment No. 2-48 and in Section IV.E, *Greenhouse Gas Emissions*, page IV.E-18 of the Draft EIR, the SCAQMD staff's proposed Interim Thresholds cited by the commenter have never been formally adopted by the SCAQMD. In the absence of an applicable adopted threshold, the City has exercised its discretion to utilize a qualitative threshold based on consistency with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAn. As explained in Section IV.E, *Greenhouse Gas Emissions* on pages IV.E-36 through IV.E-38 (which describes the approach to the analysis) and pages IV.E-39 through IV.E-75 (which provides the analysis and the results of the analysis), of the Draft EIR, the Project is consistent with the applicable provisions of these plans. Furthermore, as analyzed in Section IV.E, *Greenhouse Gas Emissions*, on pages IV.E-90 and IV.E-91 of the Draft EIR, the Project's GHG impacts were analyzed for the post-2020 time frame and specifically discusses SB 32. As stated

therein, SB 32 was passed on September 8, 2016, which would require CARB to ensure that statewide GHG are reduced to 40 percent below the 1990 emissions level by 2030. Within the context of SB 32 and post-2020 GHG reductions, SCAG's 2016-2040 RTP/SCS establishes a framework for achieving GHG reductions from the land use and transportation sectors and the state's long-term climate policies. As demonstrated in Section IV.E, *Greenhouse Gas Emissions*, in Table IV.E-5 of the Draft EIR, the Project would be consistent with the Actions and Strategies set forth in the 2016–2040 RTP/SCS and, as such, would not conflict with long-term land use and transportation strategies to achieve the state's long-term climate policies as required in SB 32. Therefore, the EIR properly concluded that the Project's GHG impacts are less than significant.

The commenter's claim that the proposed Project would result in a significant GHG emissions fails to recognize the fact that the Proposed Project is an infill development on an infill lot that is appropriately zoned and planned for the commercial office land uses that are proposed. Additionally, the Proposed Project's defining characteristics as an infill development project on an infill lot in a high quality transit area is precisely the type of project that is encouraged by the 2017 Scoping Plan, SB 375, and the 2016-2040 RTP/SCS. Thus, the commenter's argument that the Proposed Project would cause significant GHG emissions impacts is unsubstantiated. No additional analysis is warranted.

Refer also to Response to Comment 2-49.

Furthermore, as explained in detail in Responses to Comment Nos. 2-30 through 2-38, the Project's emissions modeling provided in the Draft EIR does not underestimates emissions associated with the Project's construction and operational activities. The Project's CalEEMod output files related to GHG emissions, provided in Appendix F to the Draft EIR, contain input values that are consistent with information disclosed in the Draft EIR and in some cases slightly more conservative in order to ensure that the Project's potential air quality impacts are disclosed. As a result, the Project's construction and operational GHG emissions are not underestimated and the EIR adequately evaluates the impacts that construction and operation of the Project will have on GHG emissions. Refer to Responses to Comment Nos. 2-30 through 2-38 for responses to the specific items raised in the comments regarding the Project's CalEEMod input parameters and output files. While Comment Nos. 2-30 through 2-38 were raised with respect to air pollutant emissions, the Responses to Comment Nos. 2-30 through 2-38 are also applicable to the Project's GHG emissions modeling in CalEEMod and explain the adequacy of the emissions modeling and that no changes to the GHG emissions modeling is required.

Comment No. 2-52

4) Updated Greenhouse Gas Analysis Demonstrates Significant Impact

Notwithstanding the flawed GHG evaluation discussed above, applicable thresholds demonstrate that the Project would have a significant GHG impact. As previously mentioned, in December 2008, SCAQMD released its *Interim Thresholds* that proposed the use of a 1,400 MT CO_2e/yr threshold for commercial developments, a 3,000 MT

CO_2e/yr threshold for mixed- use developments, a 3,500 MT CO_2e/yr threshold for residential developments, and a 10,000 MTCO_2e/yr threshold for industrial projects.[65] Because the proposed Project is a mixed-use development, the most appropriate screening threshold to apply to the Project would be the 3,000 MT CO_2e/yr threshold recommended by the SCAQMD for mixed-use developments.

The CalEEMod output files disclose the Project's mitigated GHG emissions (p. IV.E-85, Table IV.E-9). When these emissions are compared to the 3,000 MT CO_2e/year

DEIR Annual Greenhouse Gas Emissions

Project Phase	Proposed Project (MT CO_2e/year)
On-Road Mobile Sources	11,800
Stationary (Emergency Generators)	27
Area	20
Electricity	6,862
Natural Gas	1,846
Water Conveyance and Wastewater Treatment	505
Solid Waste	242
Construction (Amortized)	745
Proposed Subtotal	22,047
Percent Reduction (Project Only)	28%
Net Operational (Proposed – Existing)	**14,922**
SCAQMD Significance Threshold	3,000
Exceed?	***Yes***

threshold, we find that the Project's GHG emissions exceed the SCAQMD's mixed-use threshold (see table below).

As demonstrated in the table above, the proposed Project would generate a total of approximately 14,922 MT CO_2e/year, which significantly exceeds the 3,000 MT CO_2e/year mixed-use project screening threshold.[66] According to SCAQMD guidance, when emissions exceed the screening-level threshold, a more detailed review of the project's GHG emissions is warranted.[67] SCAQMD proposed per capita efficiency targets to be used in these detailed reviews. SCAQMD proposed a 2020 efficiency target of 4.8 MTCO_2e/sp/yr for project-level analyses and 6.6 MTCO_2e/sp/yr for plan-level projects (e.g., program- level projects such as general plans). Those per capita efficiency targets are based on AB 32's GHG reduction target and the 2020 GHG

emissions inventory prepared for CARB's 2008 Scoping Plan. SCAQMD also created a 2035 efficiency threshold by reducing the 2020 thresholds by 40 percent, resulting in an efficiency threshold for plans of 4.1 $MTCO_2e$/sp/yr and an efficiency threshold at the project level of 3.0 $MTCO_2e$/s/yr.[68] Therefore, per SCAQMD guidance, because the Project's GHG emissions exceed SCAQMD's 3,000 $MTCO_2e$/yr screening-level threshold and the DEIR asserts that the Project will not be operational until 2023, the Project's emissions should be compared to the proposed 2035 efficiency target of 3.0 MT CO_2e/sp/yr (p. II-48).

According to CAPCOA's CEQA & Climate Change report, service population is defined as "the sum of the number of residents and the number of jobs supported by the project."[69] The DEIR states that the proposed Project would generate approximately 2,739 new residents (with full occupancy) and 186 new employees (p. IV.J-13). As a result, we estimate that the Project's service population would be approximately 2,925 people[70]. Dividing the Project's GHG emissions by a service population value of 2,925, we find that the Project would emit approximately 5.1 $MTCO_2e$/sp/yr.[71] When we compare the Project's per service population GHG emissions to the SCAQMD 2035 efficiency target of 3.0 $MTCO_2e$/sp/yr, we find that the Project would result in a significant GHG impact (see table below).

Annual Greenhouse Gas Emissions Efficiency		
Source	**Project Emissions**	**Unit**
DEIR Annual Emissions	14,922	MT CO_2e/year
Maximum Service Population	2,925	Residents &Employees
Per Service Population Annual Emissions	**5.1**	**MT CO_2e/sp/year**
2035 SCAQMD Project Level Efficiency Threshold	3.0	MT CO_2e/sp/year
Exceed?	***Yes***	-

As you can see in the table above, when we compare the per service population emissions estimated by the DEIR to the SCAQMD threshold of 3.0 $MTCO_2e$/sp/yr for 2035, we find that the Project's emissions would exceed the threshold, thus resulting in a potentially significant impact. According to CEQA Guidelines § 15064.4(b), if there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, a full CEQA analysis must be prepared for the project. The DEIR may not ignore this analysis and application of routinely used GHG thresholds by claiming discretion in deciding which thresholds it wishes to employ. As one court explained when setting aside an EIR where commenters questioned the city's use of a particular threshold, the discretion granted to lead agencies are not "unbounded" and (emphasis added):

> "[T]he fact that a particular environmental effect *meets a particular threshold cannot be used as an automatic determinant that the effect is or is not significant* … a threshold of significance *cannot be applied in a way that would foreclose the consideration of other substantial evidence tending to show the environmental effect to which the threshold relates might be significant*." *East Sacramento Partnership for a Livable City v. City of Sacramento* (2016) 5 Cal.App.5th 281, 300, 303-304 (internal citations omitted).

Thus, the results of the above analysis provide substantial evidence that the proposed Project's GHG emissions are still cumulatively considerable notwithstanding its purported compliance with CARB's 2017 Climate Change Scoping Plan, SCAG's 2016 RTP/SCS, the LA Green Plan, and the Sustainable City pLAn (as challenged herein). Therefore, an updated CEQA analysis must be prepared for the Project, and mitigation should be implemented where necessary, per CEQA guidelines.

Footnote 65: *Supra* fn. 61.

Footnote 66: It should further be noted that this amounts to a mere 2.1 percent reduction of GHG emissions as compared to the Project's unmitigated emissions (i.e., 9,211 MT CO_2e/year). See pp. 193, pp. 195.

Footnote 67: SCAQMD (12/5/08), *supra* fn. 61, p. 6; *see also* SCAQMD (9/28/10), *supra* fn. 61, p. 2.

Footnote 68: *Ibid.*

Footnote 69: CAPCOA (Jan. 2008) CEQA & Climate Change, p. 71-72, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf.

Footnote 70: Calculated: (2,739 residents + 186 employees) = (2,925 service population)

Footnote 71: Calculated: (14,922 MTCO_2e/yr / (2,925 service population) = (5.10 MTCO_2e/sp/yr)

Response to Comment No. 2-52

As the Draft EIR explains on page IV.E-18 of Section IV.E, *Greenhouse Gas Emissions*, the SCAQMD has also yet to adopt a GHG significance threshold for residential and mixed-use development projects. As a point of reference, the SCAQMD Governing Board did adopt an interim 10,000 MTCO_2e/yr GHG significance threshold for projects where the SCAQMD is lead agency (e.g., stationary sources, rules, and plans). While this adopted threshold is not applicable to the Project, it shows that SCAQMD can and will adopt a numeric threshold that it deems appropriate.

In 2008, the SCAQMD formed a GHG Significance Threshold Working Group to further evaluate potential GHG significance thresholds. However, the aforementioned Working Group has been inactive since 2010. For this Project, the City has determined not to rely on interim drafted thresholds developed almost 10 years ago and that were never adopted. In the absence of adopted thresholds, the City has the discretion to use a significance threshold relevant to the proposed Project.

Refer also to Response to Comment 2-49 and 2-51.

Comment No. 2-53

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this

report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Response to Comment No. 2-53

This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted.

Comment No. 2-54

The remainder of Exhibit B contains resumes and CVs for the commenters and are provided in Attachment A of this response.

Response to Comment No. 2-54

This comment does not specifically contain any environmental issues contained in the EIR. Therefore, no further response is warranted.

Comment No. 2-55

EXHIBIT C

Dear Mr. Drury:

At your request, I have reviewed the Draft Environmental Impact Report (hereinafter the "DEIR") for the Times Mirror Square Project (the "Project") in the City of Los Angeles (the "City"). My review is specific to the Traffic and Circulation sections of that document and related appendices.

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 50 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and performed adequacy reviews of numerous transportation and circulation sections of environmental impact reports prepared under the California Environmental Quality Act (CEQA) including residential and mixed use complexes. My professional resume is attached. Findings of my review are summarized below.

Overview

The DEIR discloses that the Project would have significant traffic impact in the Existing + Project condition at the intersection of Broadway with W. 2nd and in the Future (2023 + Project condition at six intersections:

1. S. Figueroa Street & W. 2nd Street (PM peak hour)

5. Hill Street & W. 1st Street (AM peak hour)

10. Broadway & W. 1st Street (both peak hours)

11. S. Broadway & W 2nd Street (both peak hours)

12. S. Broadway & W. 3rd Street (AM peak hour)

17. S. Spring Street & W. 2nd Street (AM peak hour).

It is critical that the severity of impact at these locations be accurately disclosed since the DEIR finds that physical improvements at these locations are infeasible. As a consequence, in order to approve this Project, findings of overriding considerations will have to be made. To make such findings, public policy-makers and the public must have confidence that the severity of impacts that are overridden are accurately disclosed.

Response to Comment No. 2-55

This comment provides an overview to the remainder of the comment letter. Detailed responses to each of the points in the overview are provided below in Responses to Comment Nos. 2-56 through 2-66 and as part of Appendix C to this response letter.

Comment No. 2-56

There are reasons why the true severity of the Project's impacts have not been disclosed. One of these is that with the significant impacts at the intersections disclosed as noted above, it is highly likely that there would be queuing impacts at those locations. Yet the DEIR fails to consider queues at those locations. It only analyzes queues at the Project driveways.

Response to Comment No. 2-56

The transportation impact analysis in the Draft EIR traffic study was conducted in accordance with the methodology and criteria specified in the Los Angeles Department of Transportation's (LADOT's) *Transportation Impact Study Guidelines* in effect at the time of the analysis. The analysis was confirmed and accepted by LADOT in their traffic study assessment letter dated May 21, 2018, and included in Appendix L of the Draft EIR. The City, as the Lead Agency, has the discretion to determine the appropriate methodology and significance thresholds for assessing traffic impacts, The City has never established any methodology or impact criteria based on queuing. Rather, the City established and historically utilized the Critical Movement Analysis (CMA) methodology, which assesses traffic impacts based on changes in volume to capacity ratios and levels of service (LOS). The Project traffic analysis appropriately used this established methodology. As acknowledged by the commenter in Comment No. 2-55, the Draft EIR did find that the Project would have significant impacts at six intersections. This finding was based on LADOT's impact criteria for level of service. Level of service is a measure of the operating condition of an intersection and inherently reflects queuing in that there are greater levels of queuing at worse levels of service.

Comment No. 2-57

Another reason is because the DEIR analysis distained to consider the traffic consequences of the Downtown Streetcar operation. This streetcar would operate in street-running configuration southbound on Broadway and northbound on Hill Street in the Project vicinity. Seven of the DEIR's study intersections and four of the intersections disclosed to be significantly impacted by the subject Project would be on the streetcar route. The operations and/or lane reservations for the streetcar would inevitably have deleterious effects on traffic that could only intensify the severity of the Projects traffic impacts that have been disclosed. Also, the traffic impacts of the Project could have deleterious effect on streetcar operations.

Response to Comment No. 2-57

As discussed in Section IV.P, *Transportation and Traffic*, on page II-15 of the Draft EIR, the Downtown Streetcar is not currently funded. Metro's Measure M funding plan does not allocate funds to the Downtown Streetcar project until fiscal year 2053, much later than the Project's buildout year of 2024. As such, consideration of the Downtown Streetcar as a related project in the Draft EIR would be speculative. Also see the Response to Comment 2-62.

Comment No. 2-58

Another reason is the trip generation analysis applies an obsolete basic trip generation data resource and applies trip generation adjustment factors in ways that are inconsistent with the timing of certain transit improvements and the characteristics of the setting of the Project. As a consequence, the Project's contribution of net new trips is understated.

Response to Comment No. 2-58

See Response to Comments 2-63 and 2-64.

Comment No. 2-59

Yet another reason is that the traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.

Response to Comment No. 2-59

The commenter states that the Project's trip distribution understates traffic outside of a radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. The commenter agrees that this percentage is likely true of the person-trips generated by the Project. Since many of these trips could be made by walking, bicycling or transit, assigning these trips as vehicle trips is in fact a conservative assumption.

Comment No. 2-60

Finally, the analysis fails to consider the impacts of increasing reliance on Transportation Network Companies (TNCs or ridesharing).

We explore the above issues in the paragraphs below

Response to Comment No. 2-60

See Response to Comment 2-66.

Comment No. 2-61

Failure to Consider Queueing

As noted above, the DEIR discloses that the Project would have significant traffic impacts at 6 intersections in the 2023 project completion scenario. At 4 of these locations the impacts involve operations in the Level-of-Service (LOS) E or F. Locations experiencing LOS E or F operations are highly likely to have queuing problems which further degrade conditions. Yet the DEIR performed no queue analysis at these obvious locations.

Response to Comment No. 2-61

The commenter states that the Draft EIR does not provide queuing analysis at the impacted intersections in the 2023 project completion scenario. Refer to Response to Comment No. 2-56. The transportation impact analysis provided in Section IV.P, *Transportation and Traffic*, of the Draft EIR and Appendix L-1 of the Draft EIR, the Traffic Study was conducted in accordance with the methodology and criteria specified in the Los Angeles Department of Transportation's (LADOT's) *Transportation Impact Study Guidelines* in force at the time of the analysis. The Draft EIR's traffic analysis was confirmed and accepted by LADOT in their traffic study assessment letter dated May 21, 2018, and included in Appendix L-2 to the DEIR. As acknowledged by the commenter, the Draft EIR did find that the Project would have significant impacts at six intersections. This finding was based on LADOT's impact criteria for level of service. Level of service is a measure of the operating condition of an intersection and inherently reflects queuing in that there are greater levels of queuing at worse levels of service.

Comment No. 2-62

Failure to Consider the Effects of the Downtown Streetcar

As noted above, the City has approved plans for a downtown streetcar operation that would run by the Project site southbound on Broadway and close to the Project site on Hill Street. It would run through 4 of the intersections where the DEIR discloses the Project would have significant traffic impacts. The DEIR dismisses consideration of the streetcar project in the traffic analysis of the subject Project, Citing the fact that as of August 3, 2018 the Streetcar Project was not fully funded.[1] However, the Notice of Preparation ("NOP") on the subject Project was not issued until June 30, 2017. By that date the LA Bureau of Engineering published a CEQA FEIR on the Streetcar on October

24, 2016 and it was certified by the City Council on November 29, 2016. The LA City Council also approved the streetcar route on November 29, 2016. Hence, the streetcar project was reasonably foreseeable at the time of the NOP for the Times-Mirror EIR and its design was defined at a level of detail sufficient for traffic impact analysis.

Disregarding the streetcar based on funding status is inconsistent with the City's treatment of other developments contained in the list of Related Projects LADOT provides as input to the cumulative analysis. There is no evidence of consideration whether a project is fully funded to be entered onto the related projects list. The only criterion seems to be that a project has formally filed for planning, zoning and environmental approvals.

Footnote 1: See DEIR at page II-15

Response to Comment No. 2-62

The commenter states that the EIR should consider the Streetcar Project as part of the cumulative analysis. As discussed on page II-15 of Chapter II, *Project Description,* of the Draft EIR, the Downtown Streetcar is not currently funded. Metro's Measure M funding plan does not allocated funds to the Downtown Streetcar project until fiscal year 2053, much later than the Project's buildout year of 2023[45]. As such, consideration of the Downtown Streetcar as a related project in the Draft EIR would be speculative. This is consistent with the City's standard approach and applicable case law, under which transportation improvement projects without funding are not considered as related projects. The City has no reason to believe that development projects that have filed for approvals are not funded.

Comment No. 2-63

Obsolete Trip Generation Data Resource, Adjustments Inconsistent With Timing of Transit Improvements and Adjustments Inconsistent With the Nature of Project Components

The DEIR's transportation impact analysis relies on basic trip generation rates from the Institute of Transportation Engineers publication, *Trip Generation, 9th Edition*, released in 2012. The subsequent *10th Edition* was released in late 2017. A significant improvement of the *10th Edition* over the *9th Edition* is a focus on data for high rise residential and mixed use developments in dense urban settings. Even though the *10th Edition* was released a few months later than the date of the NOP, the EIR traffic impact analysis, which was not completed until early May, 2018,[2] could easily have relied on the superior edition of the data source.

Because of the limitations of early editions of Trip Generation, which focused on sites involving single land use types which were most easily countable in suburban settings where transit and pedestrian activity tended to be minimal as opposed to dense urban, well-transit-served, highly pedestrianized areas with mixed use developments, and also did not distinguish between new trips generated by the project as differentiated from

[45] Please refer to the Errata.

trips attracted from existing traffic (passers-by), adjustment factors were developed to take account of these considerations. However, in the subject DEIR some adjustments seem to have been misapplied.

Response to Comment No. 2-63

The comment states that Draft EIR's traffic analysis uses obsolete trip generation data resources. The ITE 9th Edition trip generation manual was the most up-to-date source available at the time the transportation impact analysis was conducted for the Project. The data from this source was the basis for the trip generation estimates approved by LADOT in the traffic study MOU for the Project, which was signed in March 2017 prior to release of the ITE 10th Edition manual.

The ITE 10th Edition trip generation manual provides more current trip generation rates for Center City Core areas that were not available in the ITE 9th Edition manual and are lower than trip generation rates for more suburban locations. **Table 1**, *Comparison of 9th and 10th Edition ITE Trip* Generation Rates for Project Uses, shows the differences between the two editions for both the AM and PM Peak Hour.

TABLE 1
COMPARISON OF 9TH AND 10TH EDITION ITE TRIP GENERATION RATES FOR PROJECT USES

Land Use	9th Edition AM Peak Hour Rate	10th Edition AM Peak Hour Rate	9th Edition PM Peak Hour Rate	10th Edition PM Peak Hour Rate
High-Rise Residential	0.34	0.22	0.38	0.23
Office	1.56	0.50	1.49	0.43
Supermarket	3.40	3.82	9.48	--[a]
Quality Restaurant	0.81	0.73	7.49	7.80

a The fitted curve equation Ln(T)=0.75Ln(x)+3.21 was used to calculate PM peak period trips for Supermarket land uses due to variance between the fitted curve and average rate.

SOURCE: Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition and 10th Edition.

As shown in Table 1, the AM peak hour rates for the supermarket and the PM peak hour rate for the quality restaurant increased slightly. However, all other rates decreased. If the analysis were to be updated to utilize the more recently available data from the ITE 10th Edition trip general manual, the overall peak hour and estimated daily trip generation for the Project would be lower under the 10th Edition ITE than that estimated in the Draft EIR under the 9th Edition ITE. Therefore, the transportation impact analysis presented in the Draft EIR is conservative.

Comment No. 2-64

In specific, the DEIR analysis takes a 25 percent peak hour transit credit on the trips of the Project's non-residential components based on the assumed 2023 completion of the of the 2nd St./Broadway Regional Connector Station immediately adjacent to the Project site (same completion year as the Project). This is fine for the 2023 analysis. However,

for the Existing + Project analysis those Project components should only get the 15 percent transit credit the analysis assumes for the existing uses of the site since that adjacent station did not exist in 2017.

Also, the analysis assumes a 40 percent attracted passer-by discount on trips to/from the supermarket component of the Project. However, this is a passer-by attraction rate generally only achieved in supermarkets located along suburban arterials in centers with copious surface parking. This is not even close to realistic when people are already encased in their vehicles on urban streets in a dense urban downtown trying to get somewhere else and where they would have to enter and exit a multi-level parking garage or hunt for scarce street parking.

Reasonable changes to both of these adjustment factors could significantly alter the severity of the impacts disclosed and might result in impacts at other locations. In particular, at intersection 7, Hill Street with W. 3rd, which is on the cusp of the Project causing sufficient volume/capacity (V/C) change[3] to be found to be significantly impactful (and is also on the route of the downtown streetcar) appropriate changes to these adjustment factors would certainly result in findings of significant impact.

Footnote 2: Based on the dates imprinted on the Appendix L ICU computation sheets.

Footnote 3: See DEIR Appendix L, Table 8 at page 37.

Response to Comment No. 2-64

The comment states that the Draft EIR's traffic analysis overestimates discounted trips based on Project components.

The transit credit taken in the transportation impact analysis is consistent with guidance in the LADOT *Transportation Impact Study Guidelines* in force at the time of the analysis. The LADOT guidance provides for a 25 percent credit for projects adjacent to a rail transit station. The 2nd Street/Broadway Regional Connector Station is currently under construction and will be open prior to the Project completion in 2023. Therefore, it is appropriate to consider this as an adjusted baseline condition in both the Existing plus Project and Future Project impact analyses. Furthermore, the Existing plus Project scenario is a hypothetical scenario as the Project will not be operational until 2023/2024. As it was included for comparison purposes, the same trip generation assumptions were made as for the future scenario.

Regarding the 40 percent discount applied to the supermarket, traditional pass-by trips are vehicle trips attracted from an adjacent suburban arterial. In the case of a supermarket located in a dense urban center, however, many patrons will likely walk from nearby locations and the pass-by discount was used as a surrogate for these trips. It is unlikely that a supermarket in this location would attract vehicle trips at the level that a supermarket in a suburban setting would attract; however, the available trip generation rates (in both the ITE 9th and ITE 10th Editions) are for supermarkets in suburban locations. Therefore, the 40 percent discount is appropriate. LADOT reviewed and approved the trip generation estimates and trip reduction credits in the traffic study MOU for the Project.

Comment No. 2-65

The Project Trip Distribution Understates Traffic at Critical Locations

The DEIR traffic analysis assumes that 35 percent of the Project's vehicle trips will originate or be destined within a roughly circular area of the downtown ranging in radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. It is understood that the City of Los Angeles Travel Demand Model, the reported basis for the 35 percent local trips assumption, is a person- trip mode. While this percentage is likely true of the total person-trips generated by the Project, most of the vehicle trips generated are likely to originate or be destined outside of this circle. As a consequence, the Project's contribution of traffic to critical gateway intersections at and near freeway ramps serving the downtown is understated.

Response to Comment No. 2-65

The commenter states that the Project's trip distribution understates traffic outside of a radius from about 0.75 to 0.85 miles from the intersection of W. 2nd and Broadway. The commenter agrees that this percentage is likely true of the person-trips generated by the Project. Since most of these trips could be made by walking, bicycling or transit, assigning these trips as vehicle trips is in fact a conservative assumption.

Comment No. 2-66

Lack of Consideration of Transportation Network Companies (Ridesharing) Effects on Tripmaking and Mode Choice

The rise of Transportation Network Companies (ridesharing operations like Uber and Lyft) has dramatically changed the way people travel in urban areas in recent years. Recent studies have found that TNCs have cut into transit, walk and bike shares of trip-making and caused induced trips (trips that would not otherwise be made) and, due to the recirculation to access new rides and careless loading and unloading, caused an approximate doubling in congestion and vehicle miles traveled (VMT) over that which would be ordinarily be accounted for by land use development in dense urban areas.[4] The DEIR has made no effort to estimate traffic due to TNC use due to the Project. This is a critical flaw.

Footnote 4: *TNCs & Congestion*, San Francisco County Transportation Authority, October, 2018

Response to Comment No. 2-66

The commenter states that the traffic analysis does not consider transportation network companies (TNCs) in the analysis. To date, research data into mode shares for TNC use is limited, and LADOT has not established a methodology for considering their use. Anecdotal evidence suggests that TNCs are used more for occasional discretionary trips (such as to restaurants) rather than for daily trips (such as most trips generated by residential or office uses) due to their higher cost. While the proposed Project does contain supermarket and restaurant uses, the majority of the Project is residential and office.

Comment No. 2-67

Conclusion

This concludes my comments on the Times-Mirror Project DEIR transportation element. Given the foregoing, I conclude that the DEIR transportation analysis must be revised and recirculated in draft status.

Response to Comment No. 2-67

This comment is a conclusion to the commenter's letter. Responses to these comments are provided in Response to Comment Nos. 2-56 through 2-66.

Comment No. 2-63

The remainder of Exhibit C contains a resume for the commenter and is provided in Attachment A of this response.

Response to Comment No. 2-63

No response is needed.

Comment No. 2-64

EXHIBIT D

Exhibit D contains an article written by Wanyu Chan, Yang-Seon Kim, Brett Singer, and Iain Walker on *Indoor Air Quality in New California Homes with Mechanical Ventilation*.

Response to Comment No. 2-64

Responses related to the contents of this article as it relates to the Project and the EIR are provided in Response to Comment No. 2-13.